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ABSTRACT

Using recent trend data to characterize the current financial situation of higher education, this report provides a basis for assessing the prospects for the near future. The information presented related to trends in: (1) higher education's share of the gross national product; (2) federal and state budget support for higher education; (3) enrollment rates; and (4) the personal and public ability to pay for higher education Data are in tables, and charts and an analysis is provided. (Author/MSE)

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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REPORT NUMBER 2

Financing Higher Education: Basic Facts Underlying Current Issues

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THIS PAPER WAS PREPARED WITH FINANCIAL ASSISTANCE FROM THE AMERICAN FEDERATION OF TEACHERS, AND WAS ORIGINALLY USED AS BACKGROUND MATERIAL FOR A DISCUSSION HELD BY THE AFT ADVISORY COMMISSION ON HIGHER EDUCATION.

FOREWORD

This document is intended to enlarge the common base of information shared by college faculty, administrators, students, and particularly the public, about the financial realities and possibilities facing higher education. It presents a compendium of data describing trends in sources of support, in enrollments, and in ability to pay for college; current conditions that are helping to shape the economic prospects for the sector are also characterized. This paper reflects a fundamental belief in the value of higher education and commitment to vigorous support at all levels. The information is intended to be useful to people involved in policy-making.

This work was commissioned in June, 1976 by the American Federation of Teachers' Advisory Commission on Higher Education as background material for the Commission's tasks. The information presented here was compiled by the American Council on Education's new Economics and Finance Unit from sources assembled at ACE by the Policy Analysis Service and Fact Book staff. Because compilation of this trend data was already high on their planned agenda, the new Unit accepted this assignment. Particular credit goes to Dr. Carol Van Alstyne, Chief Economist of ACE and head of the new Unit, and Sharon L. Coldren, Policy Analyst for their efforts in assembling this compendium of data.

If this proves to be a useful reference work, we expect to update it for release at the beginning of each year for the purpose of contributing to an annual statement on the general condition of higher education.

—**Robert Nielsen**
Director
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Department
American Federation of Teachers

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The Advisory Commission on Higher Education was established by the American Federation of Teachers Executive Council in the fall of 1974. The Commission is made up of AFT college and university members drawn nationally and includes Professors Irwin H. Polishook, President, Professional Staff Congress/CUNY and Norman Swenson, President, Cook County College Federation of Teachers, who serve as its co-chairpersons.

The Commission is charged with the responsibility of investigating and making recommendations to the AFT Executive Council and the president on all matters vital to our higher education constituency. This series of Commission reports is representative of the Commission's efforts.

Financing Higher Education: Basic Facts Underlying Current Issues

Whether right or wrong, recent dire economic predictions for the future of higher education run the risk of leading the various segments to act as adversaries, pitting public against private institutions, liberal arts against career-oriented colleges, and faculties against administrators, to the detriment of all.

This paper presents some basic facts underlying current issues. It is addressed to those who seek to promote higher education, even though they may start from different vantage points and use different strategies. Its purpose is to enlarge the area of shared perceptions about present realities and future possibilities.

Today, higher education is a $45 billion industry, comprising over 3,000 colleges and universities, serving 11 million students, employing more than 650,000 teaching faculty.

The decade of the sixties was a period of spectacular growth for American higher education, in fact,

the most phenomenal in the nation's history. Between 1960 and 1970, expenditures almost quadrupled, from $6.7 billion to $24.7 billion. The number of institutions increased by more than one-quarter, from 2,000 to 2,600. The hiring of faculty kept pace with the growth in enrollment, doubling over the decade from about 280,000 to 570,000 faculty. One of every two faculty members teaching in 1970 had been hired since 1960.

Higher education has continued to expand during the seventies, but the rate of increase has started to level off. Revenues have continued to climb, but inflation has seriously eroded their real value. Enrollment growth has slowed in all types of institutions, and the traditional college-age cohort will begin to decline in absolute numbers in the early 1980s.

It has been charged that colleges have overbuilt their facilities, resulting in an underutilization of capacity and an overhang of burdensome debt service. In the face of threatened and actual reductions of real resources, some colleges have imposed moratoria on hiring and have even resorted to faculty lay-offs. In efforts to keep enrollment and tuition income up with expenditures, others have lowered their admission standards. Some predict that colleges are reaching, perhaps at best, a "steady state," and others see alternative futures ranging from bad to worse to disastrous.

Using recent trend data to characterize the current economic and financial situation of higher education, this paper is intended to provide an improved basis for assessing the prospects for the near future. But it represents only the first step in a three-step policy process. The next step is to identify specific issues; and the third, to develop policy positions along with detailed proposals for action. The information presented here relates to trends in:

Higher education's share of gross national product,

Federal and state budget support for higher education,

Enrollments and college-going rates, and

"In fiscal 1976 the federal government spent $366.5 billion. Of this, $9.9 billion was spent . . . in support of higher education: That amounts to less than three cents of each federal dollar."

Ability to pay for higher education.

Current economic trends affecting the financial condition of colleges and universities are also considered.

Higher Education's Share of Gross National Product

In the 1975-76 academic year, total spending from all revenue sources (both public and private outlays) by institutions at all levels (elementary, secondary, and higher education) amounted to an estimated $120 billion. That equals about seven percent of the $1.69 trillion gross national product (GNP) for fiscal year 1976. (See Exhibits 1 and 2.) The higher education share of the $120 billion total education expenditure amounted to $45 billion, or three percent of GNP.

Since 1960, higher education's share of total education expenditures has grown steadily, increasing from 27 percent in the 1959-60 academic year to 37 percent in 1975-76. Two-thirds of the higher education share was accounted for by public institutions, and one-third by private institutions. (See Exhibit 1.)

Federal and State Budget Support for Higher Education

In fiscal 1976 the federal government spent $366.5 billion. Of this, $9.9 billion was spent, directly or indirectly, in support of higher education: That amounts to less than three cents of each federal dollar. If $2.5 billion of federally funded research performed by colleges and universities is added in, the total federal spending for higher education reaches close to $12.4 billion. And counting the $1.9 billion equivalent of taxes not collected because of exemptions and deductions benefiting higher education brings the grand total of federal support and purchases to an estimated $14.3 billion in fiscal 1976.

Recent trends in federal support can be depicted using fiscal 1972 as the base year. That year is an appropriate base because it immediately precedes enactment of the Higher Education Amendments of 1972, which created the Basic Grants pro-

gram that shifted federal support toward increased reliance on direct aid to students.

Over the four years since fiscal 1972, outlays for domestic social programs increased slightly more than total federal outlays. Comparing trends in federal support for higher education (using the $9.9 billion outlays figure) with trends in support for other important domestic social programs, we find that outlays for education (all levels) increased 68 percent—at a slightly lower rate than outlays for health (78 percent) and for income security (80 percent) but considerably less than for crime reduction (125 percent) or for training and employment programs (99 percent). (See Exhibit 3.)

Within education, support for elementary and secondary education increased least (37 percent), while support for higher education increased most (103 percent), and support for adult and continuing education grew almost as much (94 percent). (See Exhibit 3.)

More detailed breakdowns of trends in federal support for higher education by program yield interesting results, although calculating dollar amounts of support from figures reported in the various federal budget documents is far from an exact science. It is rendered imprecise because, although many programs are enacted specifically for the direct benefit of students and institutions of higher education, some programs are enacted essentially to serve national interests other than education but also provide indirect benefits for higher education; different analysts include different programs in their subtotals.

Using Office of Management and Budget classifications, "federal outlays for programs which are primarily educational," that is, *direct* expenditures, include all Office of Education programs, some support from the National Science Foundation, and social security benefits to students.[2] "Federal outlays for other basic purposes," that is, *indirect* expenditures, include principally the veterans education benefits along with other military education programs, and the National Institutes of Health and other agency spending for fellowships and training.

"At $4.3 billion in fiscal 1976, veterans education benefits . . . are about double the total amount of all Office of Education student aid programs combined."

In fact, the two largest programs of support for higher education were not at first enacted primarily as education programs but as unemployment and income security programs. At $4.3 billion in fiscal 1976, veterans educational benefits, administered by the Veterans Administration and currently assisting about 12 percent of all college students, are about double the total amount of all Office of Education student aid programs combined. The second largest student aid program, the Social Security program for the 18 to 22-year-old children of covered workers, paid out $998 million in benefits in fiscal 1976. (See Exhibit 4.)

Direct expenditures in support of higher education increased 81 percent over the four-year period. Half of the growth in direct expenditures is attributable to the federal outlays for the Basic Grants program, which increased from about $50 million in fiscal 1973 (the first year of funding) to over $900 million in fiscal 1976. Consistent with a stated commitment to equal access as the federal goal in higher education and with the intended shift to Basic Grants as the primary instrument for achieving it, funding for the institution-based student aid programs increased at lower rates: College Work-Study, Supplemental Educational Opportunity Grants (SEOG) and State Scholarship Incentive Grants (SSIG) by 56 percent, and Guaranteed Student Loans by 17 percent.

Indirect expenditures increased considerably more (120 percent), chiefly because veterans benefits increased by 200 percent from $1.4 billion to $4.3 billion; this $2.9 billion growth in veterans benefits accounts for over 55 percent of the total growth in federal support for higher education ($5.0 billion) since fiscal 1972. In fact, veterans benefits accounted for a larger share of federal support for higher education in fiscal 1976 than in 1972, before the introduction of Basic

[2] OMB has included social security benefits in the direct outlays category even though it, along with other student aid programs, provides income to cover living costs.

Grants, having grown from one-third to close to one-half of total federal outlays for higher education. Social security benefits also increased at a faster rate than most other higher education expenditures. (Exhibit 4.)

Veterans benefits in their current form are being discontinued for new enlistees as of January 1977, on the grounds that, with an all-volunteer army whose salaries are supposedly determined by market forces and related to those paid in the private sector, such benefits are no longer necessary as an inducement to enlist or as compensation for low income. Suggestions that future veterans who need aid will be able to get equivalent support through the Basic Grants program fail to recognize that benefits under this program are much lower than those under the veterans program. Moreover the veterans program provides support for dependents—an important consideration for older students—whereas the Basic Grants program, conceived primarily on the model of unmarried and dependent young persons whose financial needs are calculated on the basis of parental income, does not.

Trends in federal support for those programs which are entitlements (and provide support at specified levels to all eligible applicants) differ markedly from those programs which are subject to annual appropriation limits. Over the four-year period from fiscal 1972 to fiscal 1976, the entitlement programs increased at substantially higher rates than the annually budgeted programs. (See Exhibit 5.)

The other federal budget item which comes closest to the entitlement concept is the Guaranteed Student Loan program, with payments due under contracts between the federal government and the lenders; but these payments are for interest subsidies, special allowances, and loan losses and do not flow directly to students. Last year, over $400 million labeled "student aid" in the budget—and amounting to one-quarter of all Office of Education student aid program dollars—was actually paid in the first instance to banks and other lenders.

"Last year, over $400 million labeled 'student aid' in the budget—and amounting to one quarter of all Office of Education student aid program dollars—was actually paid in the first instance to banks and other lenders."

The U.S. Office of Education Budget

Only a small proportion of total federal funds for higher education flows through the Office of Education, about 32 percent in 1976. Of the $3.2 billion appropriated for Office of Education programs in fiscal 1976, most of the support was channeled to students, not institutions. Only $188.4 million, or 6 percent, was channeled to institutions. Specifically, it was expended for the following programs: land-grant institutions, veterans' cost-of-instruction, developing institutions, language training and area studies, community service, cooperative education, and state postsecondary (1202) commissions. (See Exhibit 6.)

Over the last few years, Congress and the Administration have debated continuously over federal support for higher education; though both sides agree on the shift to student-directed aid, they differ sharply on the details and on funding levels.

Currently, however, attention has shifted to concern with how the budget for higher education proposed by President Carter compares with that sent to Congress by President Ford.

The fiscal 1977 totals of just over $2.2 billion proposed by the Ford Administration for the Office of Education higher education programs cut expenditures $377 million below the $2.6 billion actually spent in fiscal 1976. The Carter Administration budget proposal increased spending over the 1976 level by just $48 million, not enough to compensate for inflation so that the net result is a real decline in resources available for higher education.

Specifically, the Carter Administration proposed a budget for fiscal 1977 which kept Basic Grants at the $1.7 billion level proposed by the Ford Administration, but also restored Supplemental Opportunity Grants and College Work-Study to their 1976 funding levels,as well as the institutional assistance programs totalling $191 million (which included a small increase in assistance to land-grant colleges). The Carter Administration, however, proposed to phase

out the National Direct Student Loan Program as did the Ford Administration.

The Federal Share of Higher Education Costs

The federal share of total higher education costs is below earlier peaks, whether measured by costs to students or by costs to institutions. Increased federal support for student access to higher education opportunities is reflected in very large increases in total dollars of financial aid over the last four years. Federal grant support as a proportion of total student expenses (considering both tuition and living expenses) has also increased sharply, more than doubling since the early 1970's from an estimated 13 percent to 28 percent. Yet the current federal share of costs to students is not as high as the estimated share of over 40 percent borne when the GI Bill was first introduced in the late 1940s. (See Exhibit 8.)

And the current federal share of the costs to institutions to purchase resources is less than in recent years when the federal government was investing heavily in research. The federal share of the revenues of colleges and universities has declined from one-fifth in the late 1960s, to under one-sixth, while the state and local shares have increased to over one-third of total resources.

State and Local Support

Thus, the state and local governments are currently providing more than twice as much as the federal government in funds that flow into higher education through college and university budgets.[3] (See Exhibit 9.) Looking at the United States as a whole, state and local government support for higher education has grown from 27 percent of total higher educational expenditures in 1959-60 to 35 percent in 1975-76. Dollar outlays rose from $1.8 billion to $15.6 billion in the aggregate. Local support for community colleges, concentrated in certain states accounts for less than one-eighth of the combined $15.6 billion in state and local support. (See Exhibit 1.)

"The federal share of total higher education costs is below earlier peaks, whether measured by costs to students or by costs to institutions."

Over the last several decades, overall state support for higher education has been characterized by sustained growth in funding for public institutions, even though increases did not always keep pace with enrollment growth and inflation. More recently, states have increased funding of state student aid programs and have begun to provide forms of support which help those enrolling in private as well as public higher education institutions.

States vary quite widely, however, in the proportion of their budgets devoted to higher education, although they are more closely aligned in the amount they appropriate per full-time-equivalent student.

During the last recession, many state governments confronted extremely tight budgets resulting both from shortfalls in anticipated revenues and increases in costs associated with unemployment and welfare. They were forced, even in the face of rapid inflation, to hold down increases in spending across the board.

Some public institutions which are precluded by their state constitutions from incurring deficits were particularly hard hit by state budget limitations. These public college systems have had to find ways to cut costs—often by not filling staff vacancies or even by cutting staff, by reducing plant maintenance, and by imposing enrollment ceilings,—and they have depleted reserve funds, raising the possibility that they will ask for "catch-up funds" in coming years as the state budget picture begins to look brighter again.

Trends in Funding for Research

The creation of new knowledge is regarded as an important function of American colleges and universities. In 1975, universities and colleges spent $3.1 billion for research and development. The federal government pro-

[3] Note that this does not take into account the large and increasing amounts of either state or federal aid flowing directly to students. But, on the other hand, not all of the student aid is spent to cover the institutional costs of providing the education; some is spent for living costs, including food and housing, not on education costs.

vided $2 billion, or two-thirds of the funds. From the 1950s to the 1960s, federal funding for research grew spectacularly, and the federal share of higher education research and development increased from just over half to almost three-quarters. Since the late 1960s, the growth rate in federal funding has slackened, and National Science Foundation data indicate that support for basic research has actually declined in real dollar terms. The dollars have increased, but the share of academic research funded by industry as well as by nonprofit sources has continued to decline substantially over the last two decades. (See Exhibit 10.)

Colleges and universities funded more than a quarter of their own research spending in the 1950s. Though their dollar investments in research climbed, the self-funded share declined to one-sixth during the federally funded research boom of the 1960s. As growth in federal funding slowed down, institutions, both public and private, increased their dollar commitments to research, from $267 million in 1965 to an estimated $730 million in 1975. At the height of the research boom in the mid 1960s, for every institutional dollar spent on research, the government put up $4.20. This "leverage" has declined by one-third, so that in 1975, for every dollar of institutionally financed research, the federal government has funded approximately $2.80. (See Exhibit 10.)

Changes in federal research priorities and vacillations in funding levels have resulted in employment shifts and financial strains for nonprofit colleges and universities. They do not have the reserves to cover transitions that profit-oriented industrial firms legitimately attempt to accumulate as part of the cost of doing research. On the contrary, the federal government often requires that colleges and universities participate in the funding of research on a cost-sharing basis.

Federal Tax Expenditures for Higher Education

In addition to federal budget outlays for higher education, the sector benefits from off-budget tax expenditures. "Tax expenditures" is a term used by the government (though many object to it because of its implications as to whose money is being spent) to label taxes not collected because of special exclusions, exemptions, and deductions from federal income taxes that would otherwise be payable. In fiscal 1975, an estimated $1.5 billion of these "noncollected" taxes helped meet the costs of college education. (See Exhibit 11.)

"At the height of the research boom in the mid 1960s, for every institutional dollar spent on research, the government put up $4.20. This 'leverage' has declined by one-third . . ."

The largest component of these tax expenditures was the exemption allowed to parents for dependent students age 19 and over. Other components were grants and scholarships excluded from income taxes and deductions for charitable giving by individuals and corporations.

These provisions of the tax law create incentives for investment in the education of individuals or, in the language of economists, for human capital. Such tax incentives involve smaller losses of tax revenues than do current tax incentives provided for investment in plant and equipment; that is, for physical capital. In 1975, for instance, revenue losses resulting from the investment tax credit taken by industrial firms were $5.8 billion, almost four times the amount benefiting those contributing to or investing in higher education. (See Exhibit 11.)

Trends in Enrollments and College-Going Rates

Total enrollment at colleges and universities currently stands at 11 million students, seven million full-time and four million part-time. Public institutions enroll four-fifths of the students, while private institutions enroll one-fifth. Since 1970, public institutions have accounted for well over 90 percent of the increase in enrollment; public two-year institutions by themselves accounted for over 50 percent of the increase. Opening enrollments in the fall of 1975 increased an unexpected nine percent over the fall 1974 level, following an almost equally unexpected six percent increase from 1973 to 1974. (See Exhibits 12, 13, and 14.)

Increases in enrollments in 1974 and 1975 were probably explained in large part by the continuing high level of unemployment, particularly among young people whose unemployment rates are close to double the overall rates; indeed, unemployment rates for black youth have reached levels almost four times as high as the overall rates. But people who enroll full time in college after losing a job become ineligible for unemployment benefits. (See Exhibit 15.)

Early estimates of opening enrollments for the fall of 1976 indicated almost no overall growth, and perhaps declines in enrollment in some sectors, due mainly to drops in the enrollment of veterans as benefits terminated in May 1976 for peacetime post-Korean veterans. Thus, two years of unusually high enrollment increases are followed by a year of abnormally low growth to yield an average annual growth rate in the 1970s of about four percent. (See Exhibit 16.)

Adult Students

Adult students have recently been swelling college enrollments. Close to half of all college students are now *over* the "traditional" college age of 18-21: about 5.3 million of the total 10.9 million students in 1975. One of every ten college students is over 35. When the U.S. Census Bureau expanded their school enrollment survey in 1973 to cover all age groups, not just ages 4-34 as previously, they found that almost 800,000 people over 35 were enrolled in college. These people had not been included in the surveys before 1973. (See Exhibit 17.)

The number of adult students over 30 increased by 30 percent from 1973 to 1974 and increased again by over 15 percent from 1974 to 1975, contributing to the expansion of total enrollments in these years. On the other hand, adults appear to be the most volatile of the enrollment components; adult enrollment did not increase in 1976 which helped account for a level of total enrollment about the same as in 1975. Many of the adult students are women and minority-group members, but a large proportion are white men. (See Exhibits 17 and 18.)

"Adult students have recently been swelling college enrollments. Close to half of all college students are now over the 'traditional' college age of 18-21: about 5.3 million of the total 10.9 million students in 1975."

The costs of stopping work altogether to attend school are great for most adults, who usually have family responsibilities. Consequently, a large proportion go to school part time and work either part time or full time. Their earnings from employment generally make them ineligible for need-based student financial aid, so that the pricing of tuition cost, which they bear unassisted, is an important consideration to them. It should be noted, however, that many adult students do receive tuition assistance from their employers or from veterans benefits. Also, legislative efforts are being made to increase the resources available for "lifelong learning."

College-Going Rates by Parental Income Level

Progress toward equal educational opportunity for young people can be measured by comparing college-going rates for people ages 18-24 by parental income level and by race. (See Exhibits 19 and 20.)

1. Young people from higher-income families are much more likely to go to college than are those from lower-income families: two, three, or four times more likely, depending on the income brackets used to define the high- and low-income extremes.

2. Overall, college-going rates are much higher for whites than for blacks: about one-third higher in 1974.

3. College-going rates have generally been declining since peaks in 1969. (The sharp enrollment increase in 1975-76 may, however, have reversed the downslide for that year.)

Three startling exceptions to the broad generalizations emerge from recent trend data covering the years 1972-73 to 1974-75:

1. Among lower-income groups (under $10,000) college-going rates are even lower for whites than for blacks. Over the three years, rates for low-income whites have continued to decline from the peak reached in the late 1960s while rates for low-income blacks have gone up.

2. The biggest gap between white and black college-going rates is at the

middle-income level. Middle-income ($10,000-$14,999) blacks (defining "middle-income" in terms of the income distribution of the population as a whole) have college-going rates that are substantially lower than those of blacks in the $5,000-$9,999 group and just about equal to those of blacks from the very lowest income (under $5,000) group.

3. Over the three academic years, the college-going rates of lower-income whites declined much more than those of higher-income whites, while the rates for the lower-income blacks went up. Thus, at present, inequality in college-going rates across income levels is much greater among whites than among blacks.

Investment by parents in the education of their children represents a significant intergenerational transfer of wealth in our society. For middle- and lower-income families without substantial financial assets, they may be the only transfers. Differences in accumulated wealth and current income affect the ability and willingness of families to send their children to college. These differences are mitigated but not erased by student financial aid.

Ability to Pay for Higher Education

Giving substance to the national goal of equal educational opportunity depends heavily on considerations of ability to pay for college. How great a share of the costs can—or should—be borne by the students from families at different income levels? How much should be borne by public sources or private giving?

The rationale for tuition charges at public institutions is often based on an argument that individuals should pay for that portion of the benefits that accrue to each personally while the public should pay for that portion which contributes to the social benefit. The state of the art of defining, measuring, and allocating these benefits is primitive, however, and given the complex nature of the joint products of educational endeavor unlikely ever to be very precise. But we can look at actual trends in private and public shares of support, and in factors affecting ability to pay for college.

"Within each sector of higher education, it now appears that those families who do not get offsetting financial aid are paying an increasing proportion of their income for their children's college education."

Private and Public Shares of Educational Expenditures

Lumping together all spending for higher education, the share borne by parents and students themselves has gone down over the last several decades, while the share borne by the public in the form of tax support has gone up. (See Exhibit 21.) The average tuition (dividing total tuition paid nationally by total enrollment) has also gone down in relation to median family income. But these decreases are attributable entirely to shifts in enrollment patterns. Enrollments in the public sector are growing faster than in the private, and public funds obviously account for a larger share of total revenues in the public sector. Moreover, within the public sector, enrollments in the two-year colleges, which generally have by far the largest share of public support, have grown the fastest of all. (See Exhibit 13.)

Looking at tuition costs within each sector of higher education, and considering separately the four-year and two-year colleges in both the public and the private sectors, we find that tuition has risen slightly as a share of median family income over the past two decades. Thus, within each sector of higher education, it appears that those families who do not get offsetting financial aid are paying an increasing proportion of their income for their children's college education. (See Exhibit 22.) Trends in comparative ability to pay depend on the growth of median family income of those who actually have children in college, and the effect of inflation on real income, as well as the effects of offsetting student aid on net costs of education to families of different income levels.

Inflation and Taxes

Several additional factors need to be taken into account in reaching conclusions about trends in ability to pay for college. One factor is inflation. Inflation erodes the purchasing power of the dollar while it raises money income into progressively higher in-

come tax brackets, leaving less real disposable income, after inflation and taxes are taken into account, for investment in a college education.

Another factor is that an increasing number of middle-income families got into higher income brackets by having more than one family member in the labor force. And depending on the earnings involved, a two-worker family may pay twice the social security tax that a one-worker family pays, because the economic unit which bears the social security tax is the individual worker rather than the family as for the income tax. In 51% of husband-wife families with incomes of $15,000 to $25,000 in 1974, both worked. The two-earner family may pay as much as $965 more in employment taxes than the one-earner family even though their money incomes may be exactly the same. The added employment taxes could substantially reduce the discretionary income available for investment in a college education.

Sibling Squeeze

Still another factor affecting trends in ability to pay for college is "sibling squeeze." Comparisons of trends in median family income with trends in college tuitions overlook important demographic factors that may affect a family's ability to pay for college. Statistics from U.S. Census data on one state, Michigan, confirm anecdotal reports of increasing financial pressure stemming from sibling squeeze: over the last several decades, the proportion of families with more than one child in college at the same time has increased markedly. In the 1930s and 1940s, the typical family had two children three years apart; today, the average family has three children only two years apart. In other words, the parents of a young person in the college-age (18-21) group are more likely to have another child in the same age group, and for a longer period of time, than previously. Between 1974 and 1981, the average overlap per child will rise to 2.8 years before declining to a level of under 2 years by 1985. This means that the proportion of parents who have to help finance not one, but two, or even three college educations over a very short time span is now at peak levels. (See Exhibit 23.)

"Student aid subsidies from institutional funds amounted to more than $500 million in 1974. Almost two-thirds of the funds were from private colleges and universities."

The Impact of Institutionally Funded Student Aid

Over half of all students receive no federal, state or institutional financial aid whatsoever, yet many of them attend institutions which provide substantial support to students because federal and state aid packages are still inadequate. Institutions get some of these student aid funds from endowment income, from current giving, or from other revenues specifically earmarked for student aid. But they also may draw substantial amounts of student financial aid from general revenues. If they must meet their student aid deficits by raising tuitions to those students who pay the full tuition without assistance, the result is an income redistribution, internal to the higher education system, whereby funds flow from those families who do pay the full tuition for their children currently enrolled in college to those who do not pay.

This transfer is not a negligible component of the financing of higher education. Student aid subsidies from institutional funds amounted to more than $500 million in 1974. Almost two-thirds of the funds were from private colleges and universities, where the amount would equal close to $560 for every single student enrolled in the private sector over a four-year period. Even in the public sector, an amount equivalent to $130 for every student enrolled was provided from institutional general funds for student aid. (See Exhibit 24.)

Income redistribution is generally regarded as a broad social concern, reaching far beyond the education sector. If it is not financed by broadly based sources of revenue, a disproportionate burden of financing other students falls on middle- and upper-income families whose own children are currently in college. The recent declines in college-going rates have been sharpest among middle-income families; this may be partly attributable to the additional financial burden which results from this form of income redistribution.

Current Economic Trends

The economic fortunes of those associated with higher education, including both faculty and students, are directly and inextricably tied to the financial condition of their institutions. And in turn, the financial condition of colleges and universities is greatly affected by overall economic trends. Better analysis of these relationships requires improved measures of the financial conditions of higher education institutions.

Measuring Financial Conditions

Prices and employee compensation in business and industry can be discussed with fairly precise information available about rates of output, profits, and return on investment; the financial condition of the corporation this year can be easily compared with the condition last year. But colleges and universities, nonprofit entities which use fund accounting methods, frequently do not report consolidated information describing the financial condition of the enterprise as a whole. There are no widely accepted measures of the financial condition of an academic institution. Higher education policy analyses, wage negotiations, and court decisions on tenure all rely heavily on what may be arbitrary statements about current fund surpluses or deficits, statements which may bear little relation to an institution's actual financial health.

A much firmer base for assessing financial conditions is long-run financial equilibrium. This conceptual framework is designed to help determine whether levels of revenues and expenditures and their rates of change have interrelationships which are sustainable over time.

College accountants and management analysts have recently initiated efforts to improve calculations of unit costs, break-even points for output, and trends in productivity in higher education. In addition, some colleges and universities are beginning to move toward an understanding of what is required to achieve long-run financial equilibrium. Such an understanding should contribute to the ability of institutional management, faculty, and staff to cope with financial realities and to make sound economic choices. But the shocks of the recent concurrent recession and inflation have frustrated the best efforts of colleges and universities to balance long-term trends in revenues and expenditures. The recession in 1975 helped drive up enrollments while inflation eroded real resources. Consequently, increased enrollments at many institutions contributed to, rather than alleviated, financial stringency.

"Since at least 1964, higher education has experienced inflation rates up to twice as high as the rate in the general economy . . . thus suffering for the better part of a decade from rates regarded as intolerable for the nation as a whole in 1974 and 1975."

Inflation

Though national attention has been focused on unprecedented rates of inflation during the last two or three years, higher education has been living with rapid inflation for over a decade. Since at least 1964, higher education has experienced inflation rates up to twice as high as the rate in the general economy as measured by the Consumer Price Index, thus suffering for the better part of a decade from rates regarded as intolerable for the nation as a whole in 1974 and 1975. The higher education inflation rate began to exceed 4 percent in 1965, when the rate for the general economy was less than 2 percent. Failure on the part of funding sources to compensate for this inflationary erosion has at many institutions meant declining real resources per student. (See Exhibit 25.)

In the late 1960s, the higher rates of cost increase were associated with higher-than-average increases in the wages and salaries paid to academic employees. In recent years, however, the increases in the salaries paid by higher education institutions to nonacademic employees have been relatively greater; faculty members have lost real income for the last three years.

Each year since 1972, overall increases in faculty salaries have been smaller than increases in the cost of living, with resulting losses in purchasing power of −2.2 percent in 1973, −4.8 percent in 1974, and −1.0 percent in 1975. If fringe benefits are included, the losses were not quite as

great, but they were still losses. Since the early seventies, faculty have lost ground in average compensation relative to nonacademic employees and to all nonagricultural employees. (See Exhibit 26.)

The largest component of any institutional budget is staff compensation, which usually accounts for at least half the total budget and as much as 80 to 90 percent of the instructional budget. The staff compensation share of the total budget, though still the largest component, has been declining. And, at most institutions, the faculty share of total staff compensation appears to have declined even more. The budget components that are increasing include maintenance which can be delayed no longer, utilities, student financial aid, and staff and nonstaff costs of implementing federally mandated social programs.

Stock Market Performance

The stock market plunged from a high of 1,052 in the Dow Jones Industrial Average during the academic year 1972-73 to a low of 558 during 1974-75, a loss of 45 percent. Colleges and universities were badly hit but not quite as devastated as investors generally, because their portfolios are relatively conservative. On the other hand, failing to anticipate the possibility of sharp market declines, many institutions had just shifted to a "total return" basis (including both dividends and appreciation) for determining the payout from endowment to current operating funds; these institutions were particularly hard-hit during the financial crunch of the last recession. Because the payout rate was based on the extraordinary investment performance of the late 1960s, these institutions drew income out of endowment at too liberal a rate to sustain during hard times and were forced either to cut budgets or to eat further into their endowments.

Endowment Earnings and Current Gifts

Although transfers from endowment earnings to current operations reached more than $500 million in 1973-74 for all institutions (private and public), since the turn of the century they have declined continuously as a proportion of operating revenues, from a high of about 15 percent to the current low of only 2 percent. This decline occurred for both private and public institutions, many of the latter having little or no endowment. (See Exhibit 27.)

"To balance budgets, many institutions have launched campaigns to increase current giving and have then devoted a larger and larger share of that gift income to current operations rather than investing it in endowment to earn future income."

Endowment asset values and earnings are recovering as the market begins to recoup. (See Exhibit 28.) But enrollments have expanded much faster than endowments, and consequently endowment and endowment earnings per student have declined sharply. Their value has been eroded still further by inflation. To balance budgets, many institutions have launched campaigns to increase current giving and have then devoted a larger and larger share of that current gift income to current operations rather than investing it in endowment to earn future income.

In 1973-74, close to 45 percent of voluntary private support funds were spent for capital purposes and 55 percent for current operations. In 1974-75, total giving was down 4 percent, and the proportion spent for current operations was an even greater 60 percent. Of voluntary support reported in 1974-75 for 986 institutions totaling $1.7 billion, $250 million was contributed for research, $220 million for student aid, and $100 million for faculty compensation. (See Exhibit 29.)

Voluntary private support of higher education is sizable, accounting for about $2 billion in annual support from individuals (both alumni and others), corporations, and foundations. Current giving is related to corporate profits and stock values, which are improving as the economy moves out of the recession. Therefore, the prospects for increased voluntary support are brighter for the next several years.

Indirect Cost Recovery Rates

For those institutions that have research contracts, indirect cost recovery can be an important source of revenue to cover overhead costs. The contribution to institutional overhead is currently estimated to be as much as $600 million per year from contracts

with government agencies. Though the volume of contract research has dropped over recent years, the costs of administrative overhead, which are relatively fixed, have not; consequently, overhead rates have increased as a proportion of the direct costs of research.

Costs of Federally Mandated Social Programs

Over the past decade, the costs associated with implementing a growing number of federally mandated social programs have imposed heavier and heavier burdens on colleges and universities. A recent American Council on Education study of six Task Force institutions found that such costs have doubled in the last five years.

Valued national goals are promoted by these programs: income security, affirmative action, pension reform, unemployment compensation, and occupational safety and health. At the same time, however, the sizable costs of implementing these programs are not explicitly reimbursed by any funding source. Since the costs are rising faster than revenues, funds must be taken from other spending categories at academic institutions to cover them, a situation that has exacerbated the financial instability and vulnerability of the institutions.

Increases in the social security tax—which can be fairly described as a tax transfer from those currently employed to those previously employed rather than as a straightforward insurance program—account for the largest share of these increased costs. Social security taxes are borne by institutions in the short run even if they are ultimately borne by the employees in the form of lower wages.

Between 1965 and 1975, the maximum payment made by both employer and employee more than tripled, from $227 to $824, as a result of the combined increases in the taxable income base and in the tax rate. In 1977, the maximum payment rose to $965. Social security taxes amounted to 31 percent of total federal budget receipts in 1975, up from 19 percent in 1965.

Nonprofit educational institutions are exempt from income taxes but not employment taxes. To the extent that the education sector is more labor-intensive than private industry generally, increased taxes on employment have fallen more heavily on colleges and universities than on industry, significantly eroding the benefits conferred by higher education's tax-exempt status. (See Exhibits 30 and 31.)

"Rarely has higher education faced the future with less certainty. The best strategy for dealing with uncertainty is not retrenchment, but contingency planning and action to shape priorities."

Strategies for the Future

The condition of higher education is frequently labeled, even by the relatively optimistic, as a "steady state." The connotation of "steady state" is, arguably, altogether wrong in that it implies that we know what the future condition will be and that it will be steady. Gearing up—or rather down—for a steady state can be a self-fulfilling process, itself bringing about the condition that is deemed inevitable.

A far better approach is to recognize that we do not know what the future holds for higher education. We do not know what levels of financial support will be available. We do not know how large the demand for higher education will be, or what kind of student will enroll. We do not know how people will divide their time between learning, working and relaxing.

The strong, sustained growth of the 1960s has given way to the short cycles and unexpected shocks of the 1970s—not to a steady state. The 1970s have already been marked by two recessions: in 1970-71 and 1974-75. During a period of much slower growth, the impact of cyclical fluctuations on higher education institutions is likely to be much more pronounced. Because it is not generally recognized that cycles affect higher education, current conditions are often extrapolated into the indefinite future. Thus, we in higher education have frequently been relatively unprepared when confronted by unexpected and rapidly changing circumstances. Rarely has higher education faced the future with less certainty. The best strategy for dealing with uncertainty is not retrenchment, but contingency planning and action to shape priorities.

Exhibits

EXHIBIT 1

ESTIMATED EXPENDITURES OF EDUCATIONAL INSTITUTIONS, by Source of Funds 1959-60 to 1975-76

Source of Funds by Level and Control	1959-60	1961-62	1963-64	1965-66	1967-68	1969-70	1971-72	1973-74	1975-76
	Amount, in billions of current dollars								
All Levels									
Total, public and nonpublic	$24.7	$29.9	$35.9	$45.2	$57.2	$70.2	$83.0	$98.3	$120.0
Federal	1.7	2.5	3.3	5.0	6.8	7.4	9.4	10.1	11.8
State	7.2	8.7	10.6	13.1	16.8	22.7	26.3	32.8	40.9
Local	9.7	11.2	12.7	15.1	18.6	22.2	26.4	31.2	37.2
All other	6.1	7.5	9.3	12.0	15.0	17.9	20.9	24.2	30.1
Institutions of Higher Education:									
Total, public and nonpublic	6.7	8.5	11.3	15.2	19.9	24.7	29.2	35.0	44.9
Federal	1.0	1.6	2.2	2.9	3.8	4.1	4.8	5.5	6.5
State	1.6	2.0	2.6	3.5	4.7	6.4	7.9	10.1	13.5
Local	.2	.2	.3	.4	.6	.9	1.2	1.5	2.1
All other	3.9	4.7	6.2	8.4	10.8	13.3	15.3	17.9	22.8
Total, public	3.8	4.7	6.4	8.8	12.3	15.8	19.1	23.2	30.1
Federal	.5	.8	1.1	1.5	2.1	2.4	2.9	3.4	4.1
State	1.6	1.9	2.5	3.4	4.6	6.3	7.7	9.8	13.1
Local	.2	.2	.3	.4	.6	.8	1.1	1.4	2.0
All other	1.5	1.8	2.5	3.5	5.0	6.3	7.4	8.6	10.9
Total, nonpublic	2.9	3.8	4.9	6.4	7.6	8.9	10.1	11.8	14.8
Federal	.5	.8	1.1	1.4	1.7	1.7	1.9	2.1	2.4
State	*	.1	.1	.1	.1	.1	.2	.3	.4
Local	*	*	*	*	*	.1	.1	.1	.1
All other	2.4	2.9	3.7	4.9	5.8	7.0	7.9	9.3	11.9

*Less than $50 million

Source: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Projections of Educational Statistics*, 1970, 1974, 1975 editions. (Washington: GPO)

EXHIBIT 2

HIGHER EDUCATION OUTLAYS AS A PERCENTAGE OF GROSS NATIONAL PRODUCT (GNP) 1966-1977

	In Billions of Dollars			As Percentage of GNP			
				Federal Outlays			
Fiscal Year	GNP	Total Federal Outlays	Total Higher Education Outlays[a]	Total	National Defense	Payments to Individuals	Higher Education Outlays[a]
1966	$ 721.1	$134.7	$15.2	18.7%	7.8%	4.8%	2.1%
1967	774.4	158.3		20.4	8.9	5.2	
1968	829.9	178.8	19.9	21.5	9.6	5.5	2.4
1969	903.7	184.5		20.4	8.9	5.8	
1970	959.0	196.6	24.7	20.5	8.3	6.2	2.6
1971	1,019.3	211.4		20.7	7.5	7.3	
1972	1,110.5	232.0	29.2	20.9	7.0	7.7	2.6
1973	1,237.5	247.1		20.0	6.1	7.7	
1974	1,360.9	269.6	35.0	19.8	5.8	8.2	2.6
1975	1,450.6	326.1		22.5	6.0	9.8	
1976	1,693.0	366.5	44.9[b]	21.7	5.6	10.4	2.7
1977 (estimate)	1,880.0	411.2		22.5	5.5	10.1	

[a] Includes public and private outlays.

[b] Estimate.

Sources: 1. U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Projections of Educational Statistics*, 1975 edition, (Washington: GPO) Table 1.21.

2. Executive Office of the President, Office of Management and Budget, *The U.S. Budget in Brief, Fiscal Years 1977* and *1978*. (Washington: GPO)

EXHIBIT 3A

HIGHER EDUCATION OUTLAYS AS COMPARED TO FEDERAL OUTLAYS FOR OTHER SOCIAL PROGRAMS

(Outlays in millions)

Total Federal Outlays	FY 1972 Actual	FY 1973 Actual	FY 1974 Actual	FY 1975 Actual	FY 1976 Actual	Percent Increase 1972-1976
Education[a]	$11,941	$13,553	$14,025	$18,216	$20,073	68%
Elementary and secondary	5,274	5,618	5,812	7,251	7,217	37
Higher education	4,872	5,800	5,991	8,298	9,901	103
(excluding veterans benefits)	(3,436)				(5,600)	63
Adult and continuing education	799	1,103	1,085	1,283	1,550	94
Training and employment (manpower programs)	4,363	4,952	4,692	6,144	8,670	99
Health	24,531	26,030	29,189	36,790	43,613	78
Income security	91,276	95,949	111,167	138,238	164,639	80
Civil rights[b]						
Crime reduction	1,353	1,806	2,431	2,821	3,043	125
Total federal outlays for all purposes	231,876	246,526	268,392	324,601	366,466	58

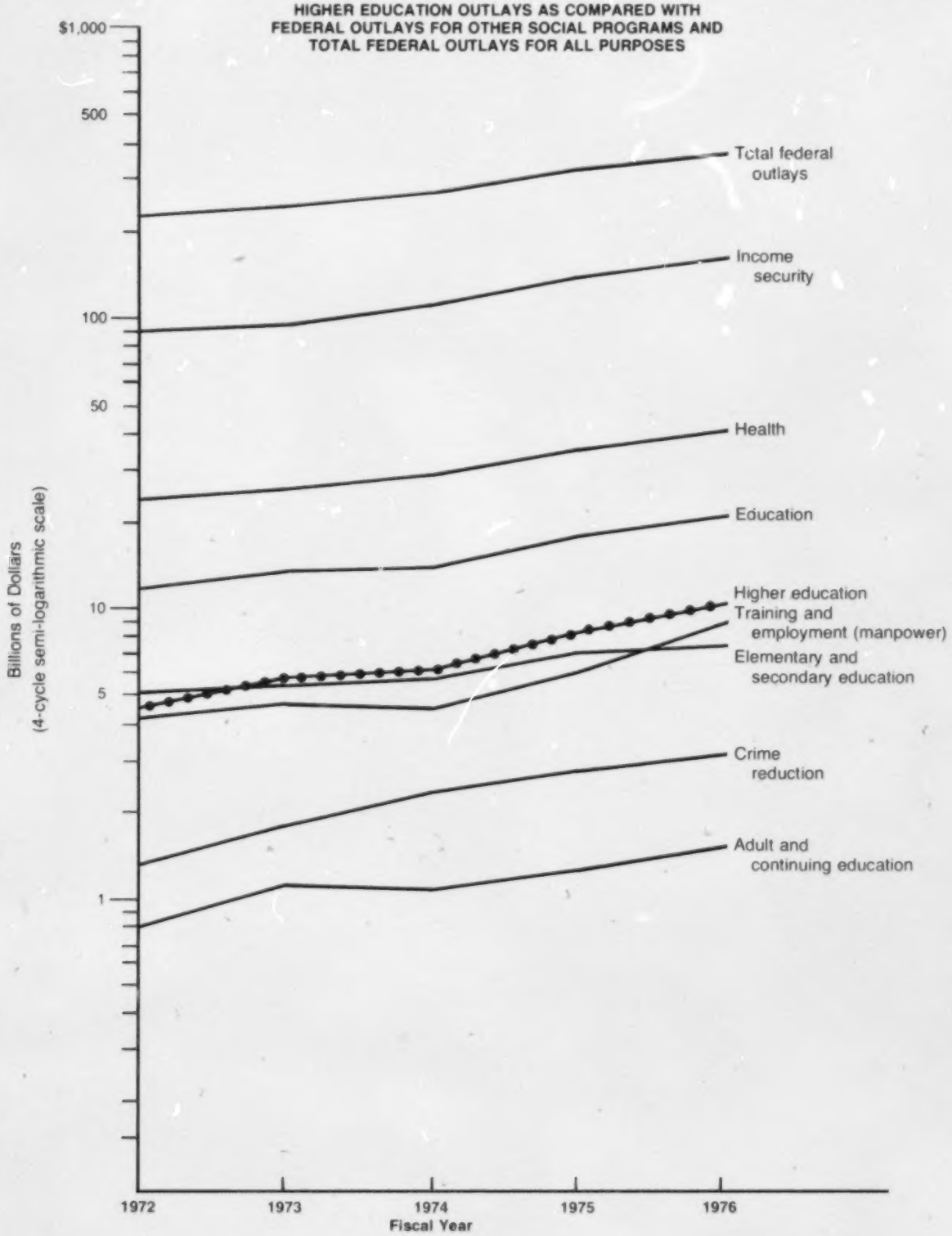
[a] Subcategories do not add to totals because of minor programs not detailed here.

[b] Less than $5 million.

Source: Dollar figures from Executive Office of the President, Office of Management and Budget, *Special Analyses, Budget of the United States Government, Fiscal Years 1974, 1975, 1976, 1977*, and *1978*. (Washington: GPO)

EXHIBIT 3B

HIGHER EDUCATION OUTLAYS AS COMPARED WITH FEDERAL OUTLAYS FOR OTHER SOCIAL PROGRAMS AND TOTAL FEDERAL OUTLAYS FOR ALL PURPOSES



Source: Data from Executive Office of the President, Office of Management and Budget, *Special Analyses, Budget of the United States Government, Fiscal Years 1974, 1975, 1976, 1977, and 1978.* (Washington: GPO)

EXHIBIT 4

HIGHLIGHTS IN FEDERAL OUTLAYS FOR HIGHER EDUCATION
(Outlays in Millions)

	FY 1972 Actual	FY 1973 Actual	FY 1974 Actual	FY 1975 Actual	FY 1976 Actual	Percent Increase 1972-1976
Federal outlays for national higher education goals						
Subtotal (direct)	$2,186	$2,381	$2,236	$3,139	$3,946	81%
Basic grants	—	—	49	342	905	—
CWS, SEOG, SSIG	418	542	261	499	646	56
GSL	228	206	294	254	266	17
*	*	*	*	*	*	
Social security (OASDI)	521	638	618	840	998	92
Federal outlays for other basic purposes						
Subtotal (indirect)	2,696	3,419	3,755	5,159	5,955	120
Veterans benfits	1,436	2,016	2,309	3,479	4,301	200
*	*	*	*	*	*	
Total federal outlays for higher education	4,872	5,800	5,991	8,298	9,901	103
(Excluding veterans benefits)	(3,436)				(5,600)	63

*Data on other programs available but not consistent over time.

Source: Dollar figures from Executive Office of the President, Office of Management and Budget, *Special Analyses, Budget of the United States Government, Fiscal Years 1974, 1975, 1976, 1977,* and *1978.* (Washington: GPO)

EXHIBIT 5

GROWTH IN ENTITLEMENT PROGRAMS COMPARED TO OTHER FEDERAL HIGHER EDUCATION PROGRAMS
(Outlays in Millions)

	FY 1972 Actual	FY 1973 Actual	FY 1974 Actual	FY 1975 Actual	FY 1976 Actual	Percent Increase 1972-76
Total higher education outlays	$4,872	$5,800	$5,991	$8,298	$9,901	103%
Subject to annual appropriations:						
O.E., other programs	2,925	3,146	3,064	3,979	4,602	57
Entitlements:	1,957	2,654	2,927	4,319	5,299	171
Veterans benefits	1,436	2,016	2,309	3,479	4,301	200
Social security	521	638	618	840	998	92

Source: Data from Executive Office of the President, Office of Management and Budget, *Special Analyses, Budget of the United States Government, Fiscal Years 1975, 1976, 1977,* and *1978.* (Washington: GPO)

EXHIBIT 6

U.S. OFFICE OF EDUCATION PROGRAMS FOR HIGHER EDUCATION (In Millions)

	FY 1975 Actual Appropriations	FY 1976 Actual Appropriations
1. Student assistance:		
Basic opportunity grants	$ 660.0	$1,540.0[a]
Supplemental opportunity grants	240.3	240.0
Work-study (HEA IV-C)	420.0[b]	390.0
Subsidized insured loans—Interest subsidies (HEA IV-B)	382.4	452.0
Direct loans	329.4	332.0
Incentive grants for state scholarships (HEA IV-A-3)	20.0	44.0
Subtotal	2,052.1	2,998.0
2. Special programs for the disadvantaged (HEA IV-A-4)		
Talent Search	6.0	
Upward Bound	38.3	
Special services in college	23.0	
Educational opportunity centers	3.0	
Subtotal	70.3	70.3
3. Institutional assistance:		
Strengthening developing institutions (HEA III)	110.0	110.0
Language training and area studies:		
Centers, fellowships, and research (NDEA VI)	11.3	13.3
Fulbright-Hays fellowships (FHA)	2.7	2.7
Subtotal	14.0	16.0
University community services (HEA I)	14.3	12.1
Aid to land-grant colleges:		
Annual appropriation (Bankhead-Jones Act)	9.5	9.5
Permanent appropriation (Second Morrill Act)	2.7	2.7
Subtotal	12.2	12.2
State postsecondary education commissions (HEA-1203)	3.0	3.5
Veterans cost of instruction (HEA IV-A-5, 420)	31.2	23.8
Cooperative education (HEA IV-D)	10.8	10.8
Construction	—	—
Subtotal	195.6	38.1
4. Personnel development:		
College teacher fellowships (HEA IX-B)	4.0	1.0
Training for disadvantaged (HEA IX-D)	.8	.8
Public service fellowships (HEA IX A&C)	4.0	4.0
Mining fellowships (HEA IX-D)	1.5	3.0
Subtotal	10.3	8.8
TOTAL	2,321.2	3,249.5

[a] Funds available—includes $214 million drawdown from fiscal 1977 appropriation.
[b] Includes $110,800,000 made available in fiscal year 1976 Continuing Resolution which was merged with fiscal year 1975 appropriation for use during academic year 1975-76.

Sources: 1. *Higher Education and National Affairs*, American Council on Education, vol. XXV, no. 3, p. 4.
2. American Council on Education, Policy Analysis Service Office of Governmental Relations, "A Proposed Federal Budget for Higher Education Programs, F.Y. 1978," (unpublished paper, Washington: American Council on Education) December 6, 1976.

EXHIBIT 7

FEDERAL OUTLAYS FOR HIGHER EDUCATION BY AGENCY

Sublevel, agency and program	Outlays (millions) 1974 actual	1975 estimate	1976 estimate
2-year institutions:			
Office of Education:			
Basic opportunity grants	24	225	251
Other higher education	172	231	270
Occupational and vocational education	140	156	151
Student grants (OASDI)	67	75	85
Health Resources Administration	66	70	47
Veterans readjustment	1,000	1,171	1,099
Other	103	105	96
Subtotal, 2-year institutions	1,572	2,033	1,999
Other undergraduate:			
Military service academies	220	240	262
Reserve Officers Training Corps	157	165	171
Health manpower (NIH)	87	98	66
Office of Education:			
Basic opportunity grants	25	226	251
Work-study and supplementary grants	204	361	407
Guaranteed student loans	177	222	262
Construction loans and grants	52	44	47
Disadvantaged students and developing institutions	91	118	125
Direct student loans	239	216	266
Other	51	99	110
Student grants (OASDI)	552	620	700
Special institutions	53	56	48
Office of the Secretary	66	61	60
Bureau of Indian Affairs	16	25	26
International Development Assistance	29	53	95
Veterans readjustment	992	1,162	1,092
National Science Foundation	19	23	26
Other	136	172	98
Subtotal, other undergraduate	3,166	3,961	4,112
Graduate and professional:			
Health Services Administration	21	24	26
Health manpower (NIH)	144	164	141
ADAMHA	75	95	71
Health Resources Administration	392	445	405
Higher education	120	121	134
Social and Rehabilitation Service	17	18	12
Special institutions	31	38	39
Veterans readjustment	317	370	348
Department of Defense	89	89	89
National Science Foundation	17	14	19
Other	31	41	35
Subtotal, graduate and professional	1,254	1,419	1,319
Total	5,992	7,413	7,430

Source: Reprinted from *Special Analyses, Budget of the United States Government, Fiscal Year 1976*, Executive Office of the President, Office of Management and Budget (Washington: GPO), p. 153.

EXHIBIT 8

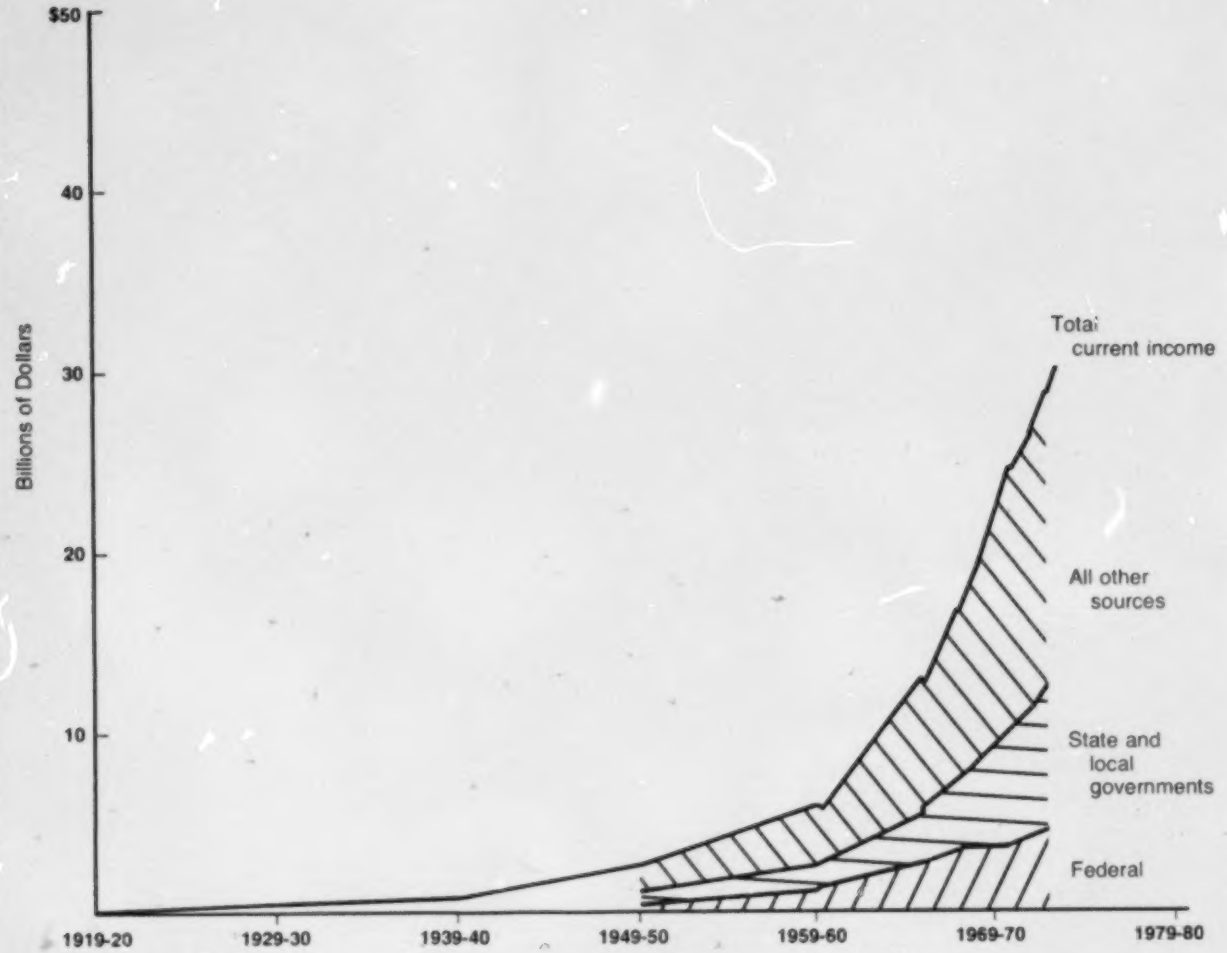
GROSS ESTIMATE OF THE SHARE OF FEDERAL SUPPORT OF TOTAL STUDENT EXPENSES

Year	FTE Enrollment	Student Expenses (in millions)			Federal Grants (in millions)	Federal Support as Percent of Total Expenses
		Tuition	Living Expenses	Total Costs		
1947-48	2,009,238	$ 502	$ 1,834	$ 2,336	$1,000 Veterans benefits	43%
1970-71	6,793,437	$4,344	$ 7,899	$12,243	$ 420 Office of Education 530 Social security 670 Veterans benefits $1,620 Total	13%
1976-77	8,307,236	$7,917	$16,066	$23,983	$2,322 Office of Education[a] 1,317 Social security 3,186 Veterans benefits $6,825 Total	28%

[a] Includes Basic Grants, Supplemental Educational Opportunity Grants, and College Work-Study programs.
Source: Estimates provided by Carol Van Alstyne and Cathy Henderson, Policy Analysis Service, American Council on Education, 1976.

EXHIBIT 9

CURRENT FUND INCOME OF COLLEGES AND UNIVERSITIES BY SOURCE
1909-10 to 1972-73



Sources: 1. American Council on Education, *A Fact Book on Higher Education*, 1974 edition (Washington: American Council on Education), 2. U.S. Office of Education, National Center for Education Statistics, unpublished data, July 1975.

EXHIBIT 10A

FUNDS EXPENDED ANNUALLY FOR RESEARCH AND DEVELOPMENT AT UNIVERSITIES, COLLEGES AND ASSOCIATED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFRDC's) Distributed By Source, 1953-1975[a]

	Universities and Colleges					Associated FFRDC's[c]		Total Universities and FFRDC's	
		Source					Source		Source
Year	Total Funds Used	Federal Government	Industry	Universities and Colleges[b]	Other Nonprofit Institutions	Total Funds Used	Federal Government	Total Funds Used	Total Federal Funds Used
1953	255[d]	138	19	72	26	121	121	376	259
1954	290	160	22	80	28	141	141	431	301
1955	312[d]	169	25	88	30	180	180	492	349
1956	372[d]	213	29	96	34	194	194	566	407
1957	410[d]	229	34	109	38	240	240	650	469
1958	456	254	39	121	42	293	293	749	547
1959	526[d]	306	39	134	47	338	338	864	644
1960	646[d]	405	40	149	52	360	360	1006	765
1961	763[d]	500	40	165	58	410	410	1173	910
1962	904[d]	613	40	185	66	470	470	1374	1083
1963	1081[d]	760	41	207	73	530	530	1611	1290
1964	1275	916	41	235	83	629	629	1904	1545
1965	1474[d]	1073	41	267	93	629	629	2103	1702
1966	1715	1262	42	303	108	630	630	2345	1892
1967	1921[d]	1409	48	345	119	673	673	2594	2082
1968	2149	1573	55	390	131	719	719	2866	2292
1969	2220[d]	1595	60	420	145	725	725	2945	2320
1970	2335	1648	61	461	165	737	737	3072	2385
1971	2500[d]	1724	70	529	177	716	716	3216	2440
1972	2675	1838	75	576	186	764	764	3439	2602
1973	2934	2044	86	604	200	817	817	3751	2861
1974 (est)	3008	2018	96	683	211	865	865	3873	2883
1975 (est)	3100	2050	100	730	220	910	910	4010	2960

Notes:

[a] All data are based on reports by performers of research.

[b] Includes State and local government funds.

[c] FFRDC's administered by individual universities and colleges and by university-consortia.

[d] Estimates derived from related information because either no sector survey was conducted for this year or this item was not obtained in the survey.

Source: National Science Foundation, *National Patterns of R&D Resources, Funds and Manpower in the U.S., 1953-1975*, (Washington: GPO, NSF 75-307), pp. 18-19.

EXHIBIT 10B

SHARES OF COLLEGE AND UNIVERSITY RESEARCH DOLLARS 1953-1975

	Universities and Colleges					
		Sources				Funding of Research and Development at Colleges and Universities:
Year	Total Funds Used	Federal Government	Industry	Universities and Colleges[b]	Other Nonprofit Institutions	Dollars of Federal Funds Per Dollar of Institutional Funds
1953	100%	54.1%	7.6%	28.2%	10.2%	$1.90
1954	100	55.2	7.6	27.6	9.7	2.00
1955	100	54.2	8.0	28.2	9.6	1.90
1956	100	57.2	7.8	25.8	9.1	2.20
1957	100	55.9	8.3	26.6	9.3	2.10
1958	100	55.7	8.6	26.5	9.2	2.10
1959	100	58.1	7.4	25.4	8.9	2.30
1960	100	62.7	6.2	23.1	8.0	2.70
1961	100	65.5	5.2	21.6	7.6	3.00
1962	100	67.8	4.4	20.5	7.2	3.30
1963	100	70.3	3.8	19.1	6.8	3.70
1964	100	71.8	3.2	18.4	6.5	2.60
1965	100	72.8	2.8	18.1	6.3	4.00
1966	100	73.6	2.4	17.7	6.3	4.20
1967	100	73.3	2.5	18.0	6.2	4.10
1968	100	73.2	2.6	18.1	6.1	4.00
1969	100	71.8	2.7	18.9	6.5	3.80
1970	100	70.6	2.6	19.7	7.1	3.60
1971	100	69.0	2.8	21.2	7.1	3.10
1972	100	65.7	2.8	21.5	7	3.10
1973	100	69.7	2.9	20.6	6.8	3.40
1974 (est)	100	67.1	3.2	22.7	7	3.00
1975 (est)	100	66.1	3.2	23.5	7.1	2.80

Notes:

[a] All data are based on reports by performers of research.

[b] Includes State and local government funds.

[c] FFRDC's administered by individual universities and colleges and by university-consortia.

[d] Estimates derived from related information because either no sector survey was conducted for this year or this item was not obtained in survey.

Source: American Council on Education, Economics and Finance Unit, August 1976, based on data from National Science Foundation, *National Patterns of R & D Resources, Funds, and Manpower in the U.S., 1953-1975*, (Washington: GPO, NSF 75-307), pp. 18-19.

EXHIBIT 11

TAX EXPENDITURE ESTIMATES FOR HIGHER EDUCATION[1]
(Millions of Dollars)

	FY 1974	FY 1975	FY 1976	FY 1977
Exclusion of scholarships and fellowships	$ 195	$ 200	$ 210	$ 220
Parental personal exemptions for students 19 and over	655	670	690	715
Deductibility of contributions to educational institutions[2]				
By corporations	155	205	215	280
By individuals	355	440	450	500
Total	$1,360	$1,515	$1,565	$1,715

[1] Estimates are based on the U.S. Tax Code as of January 1, 1976.
[2] Deductible contributions include those to all educational institutions, not just higher education.

Source: Executive of the President, Office of Management and Budget, *Special Analysis of the Budget of the United States Government, Fiscal Year 1976*, p. 108 and *Fiscal Year 1977*, p. 125.

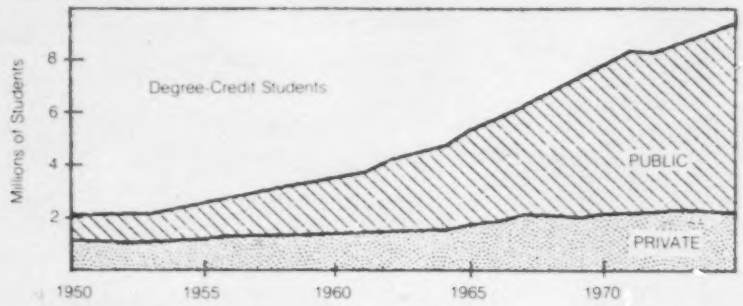
. . . . .

INVESTMENT TAX CREDIT
Estimated Revenue Loss

	Individuals and Corporation
FY 1975	5,810
FY 1976	8,260
FY 1977	9,115

Source: U.S. Senate Budget Committee, *Tax Expenditures, Compendium of Background Materials*, March 17, 1976, p. 57.

EXHIBIT 12



OPENING FALL ENROLLMENT
By Control of Institution, 1950-1975

Opening Fall Enrollment in All Institutions in the U.S. and Outlying Parts[a]

Year	Number			Percent Distribution		Indexes (1965 = 100)		
	Total	Public	Private	Public	Private	Total	Public	Private
				Degree-Credit Students				
1950	2,296,592	1,154,456	1,142,136	50%	50%	41	32	60
1955[b]	2,678,623	1,498,510	1,180,113	56	44	48	41	62
1960	3,610,007	2,135,690	1,474,317	59	41	65	58	77
1961	3,891,230	2,351,719	1,539,511	60	40	70	64	80
1962	4,206,672	2,596,904	1,609,768	62	38	76	71	84
1963	4,528,516	2,872,823	1,655,693	63	37	81	79	86
1964	4,987,867	3,205,783	1,782,084	64	36	90	88	93
1965	5,570,271	3,654,578	1,915,693	66	34	100	100	100
1966[c]	5,928,000	3,940,000	1,988,000	66	34	106	108	104
1967[c]	6,406,000	4,360,000	2,046,000	68	32	115	119	107
1968	6,983,093	4,928,320	2,054,773	71	29	125	135	107
1969	7,542,992	5,454,990	2,087,993	72	28	135	149	109
1970	7,985,532	5,845,032	2,140,500	73	27	143	160	112
1971	8,188,169	6,059,989	2,128,180	74	26	147	166	111
1972	8,341,919	6,207,134	2,134,785	74	26	150	170	111
1973	8,602,153	6,442,084	2,160,069	75	25	154	176	113
1974	9,109,883	6,891,422	2,218,461	76	24	164	189	116
1975	9,830,224	7,480,524	2,349,700	76	24	176	205	123
				Degree-Credit and Non-Degree-Credit Students				
1965	5,967,411	3,999,940	1,967,471	67	33	100	100	100
1966	6,438,477	4,381,086	2,057,391	68	32	108	110	105
1967	6,963,687	4,850,330	2,113,357	70	30	117	121	107
1968	7,571,636	5,469,472	2,102,164	72	28	127	137	107
1969	8,066,233	5,939,513	2,126,720	74	26	135	148	108
1970	8,649,368	6,476,058	2,173,310	75	25	145	162	110
1971	9,025,031	6,854,685	2,170,346	76	24	151	171	110
1972	9,297,787	7,122,875	2,174,912	77	23	156	178	111
1973	9,694,297	7,478,407	2,215,890	77	23	162	187	113
1974	10,321,539	8,049,595	2,271,944	78	22	173	201	115
1975	11,290,719	8,896,021	2,394,698	79	21	189	222	122

Sources: 1. USOE, *Opening (Fall) Enrollment in Higher Education, 1960; Analytic Report* (Washington: GPO, 1961), p. 10.

2. USOE, *Opening Fall Enrollment in Higher Education* (Washington: GPO), 1964, p. 3; 1965, p. 7; 1966, p. 8; 1967, p. 6; 1968, p. 6; 1969, p. 9; 1970, p. 10; 1971, p. 3; 1972, p. 3; 1973 and 1974, prepublication data.

Reprinted from American Council on Education, *A Factbook on Higher Education*, First Issue 1975, (Washington: American Council on Education, Table 75-65, with updated 1975 data from the National Center for Education Statistics, December 18, 1976.

EXHIBIT 13

TRENDS IN ENROLLMENT IN HIGHER EDUCATION
Degree-Credit Enrollment
Head Count

	1960-61	1970-71	Increase 1960-61 to 1974-75	Percent Increase	Percent Distribution of Increase
All Institutions	3,610,007	7,320,149	4,310,142	119	100
Public	2,135,690	5,800,089	3,664,399	172	85
University	991,716	2,277,735	1,286,019	130	30
4-year	750,421	2,002,592	1,252,171	167	29
2-year	393,553	1,519,762	1,126,209	286	26
Private	1,474,317	2,120,080	645,763	44	15
University	559,186	722,560	163,374	29	4
4-year	855,067	1,287,280	432,213	51	10
2-year	60,064	110,220	50,156	84	1

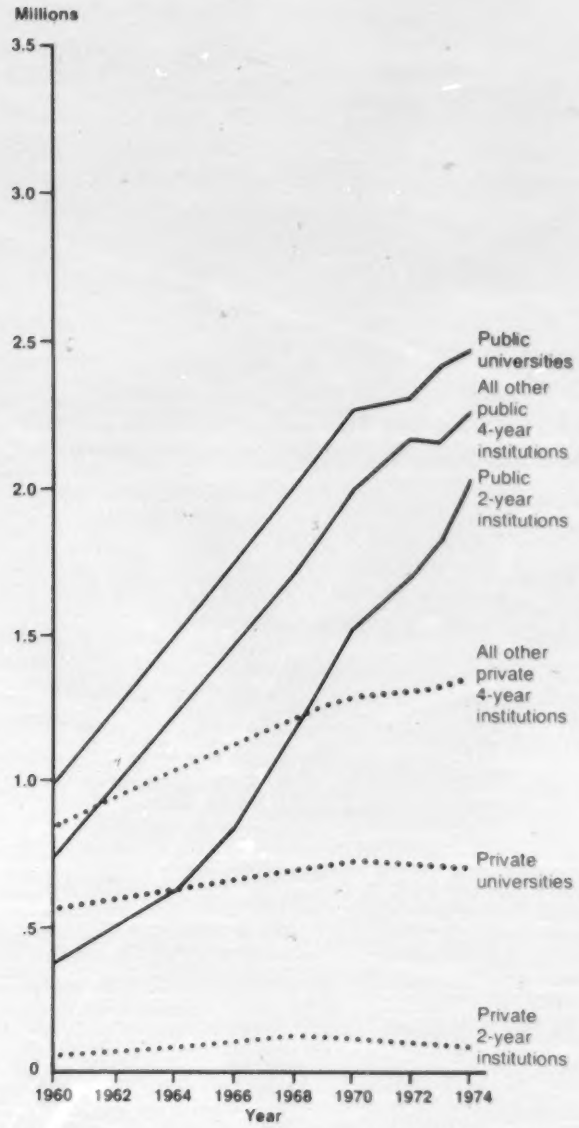
	1970-71	1974-75	Increase 1970-71 to 1974-75	Percent Increase	Percent Distribution of Increase
All Institutions	7,920,149	9,023,446	1,103,297	14	100
Public	5,800,089	6,838,324	1,038,235	18	94
University	2,277,735	2,480,804	203,069	9	18
4-year	2,002,592	2,253,389	250,797	13	23
2-year	1,519,762	2,104,126	584,364	38	53
Private	2,120,080	2,185,122	65,042	3	6
University	722,560	716,308	−6,252[1]	−1	—
4-year	1,287,280	1,374,646	87,366	7	8
2-year	110,220	94,168	−16,052	−15	—

[1] 1970-71 was an all-time peak; 1974-75 was the second highest—up 11,873 from 1973-74.

Source: Data from the National Center for Education Statistics, *The Condition of Education 1976*, (Washington: GPO, NCES 76-400) p. 183.

EXHIBIT 14

DEGREE CREDIT ENROLLMENT IN HIGHER EDUCATION
By Type and Control of Institution
1960-1974



Source: Reprinted from the U.S. Department of Health, Education and Welfare, National Center for Education Statistics, *The Condition of Education, 1976 edition* (Washington: GPO), p. 17.

EXHIBIT 15A

UNEMPLOYMENT LEVELS AND RATES
Individuals 18-24 Years of Age Compared with Total Population, by Race
1968-1976
(Level in Thousands)

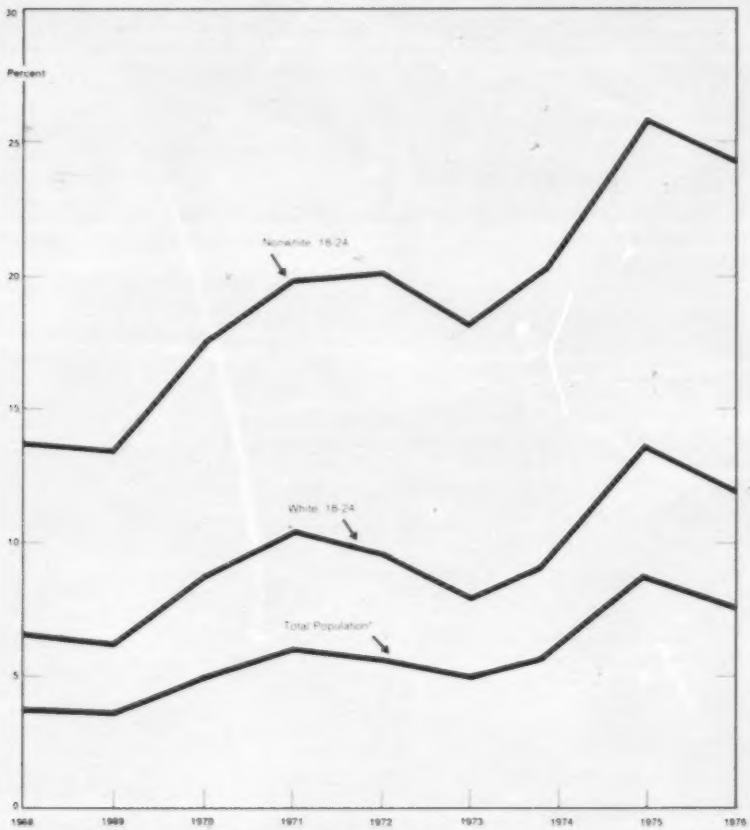
	18-24						Total*					
	Total		White		Nonwhite		Total		White		Nonwhite	
Year	Level	Rate	Level	Rate	Level	Rate	Level	Rate	Level	Rate	Level	Rate
1968	968	7.4	740	6.5	228	13.6	2,817	3.6	2,226	3.2	590	6.7
1969	977	7.1	741	6.1	235	13.4	2,832	3.5	2,260	3.1	571	6.4
1970	1,433	9.8	1,110	8.6	323	17.5	4,088	4.9	3,337	4.5	752	8.2
1971	1,784	11.5	1,404	10.3	379	19.9	4,993	5.9	4,074	5.4	919	9.9
1972	1,790	10.8	1,385	9.5	405	20.1	4,840	5.6	3,885	5.0	956	10.0
1973	1,582	9.0	1,189	7.8	393	18.1	4,304	4.9	3,412	4.3	894	8.9
1974	1,899	10.5	1,454	9.1	446	20.1	5,076	5.6	4,057	5.0	1,018	9.9
1975	2,791	15.0	2,211	13.5	580	26.1	7,030	8.5	6,371	7.8	1,459	13.9
1976	2,588	13.5	2,019	12.0	568	24.5	7,288	7.7	5,855	7.0	1,433	13.1

* Persons 16 years of age or older who were unemployed.

Source: U.S. Department of Labor, Bureau of Labor Statistics; Washington, D.C., unpublished data provided by Tom Bradshaw and Roberta McKay.

EXHIBIT 15B

UNEMPLOYMENT RATES OF YOUNG PEOPLE, BY RACE AS COMPARED WITH OVERALL RATES



*Persons 16 years of age or older who were unemployed

Source: U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C., unpublished data provided by Tom Bradshaw and Roberta McKay.

EXHIBIT 16

ANNUAL INCREASES IN HIGHER EDUCATION OPENING FALL ENROLLMENT
All Institutions
1971-1976

Fall	Annual Increase Over Previous Fall
1971	+4.3%
1972	+3.0%
1973	+4.2%
1974	+6.5%
1975	+9.4%
1976 estimate	+0.4%

Source: U.S. Department of Health Education and Welfare, National Center for Education Statistics, Washington, D.C.

EXHIBIT 17

AGE DISTRIBUTION OF COLLEGE STUDENTS
(Numbers in Thousands)

Age	1970		1971		1972		1973		1974		1975		Percent Change 1974-1975
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
14-15	0	—	5	.1	5	.1	6	.1	5	.1	7	.1	+40.0
16-17	260	3.5	279	3.4	290	3.5	289	3.2	304	3.1	286	2.6	−5.9
18-19	2,594	35.0	2,726	33.7	2,680	32.2	2,517	28.1	2,597	26.3	2,943	27.0	+13.3
20-21	1,857	25.1	1,997	24.7	2,116	25.4	2,073	23.1	2,192	22.3	2,313	21.3	+5.4
22-24	1,354	18.3	1,487	18.4	1,461	17.6	1,465	16.3	1,527	15.5	1,679	15.4	+10.0
25-29	939	12.6	1,067	13.2	1,229	14.8	1,278	14.3	1,482	15.0	1,616	14.9	+9.0
30-34	410	5.5	527	6.5	531	6.4	551	6.1	720	7.3	853	7.8	+18.5
Subtotal							8,179	91.2	8,827	89.6	9,697	89.1	+9.9
35 and over							787	8.8	1,025	10.4	1,183	10.9	+15.4
Total	7,413	100.0	8,087	100.0	8,313	100.0	8,966	100.0	9,852	100.0	10,880	100.0	+10.4

Columns may not add to totals because of rounding.

Source: American Council on Education, Policy Analysis Service, based on U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, (Washington: GPO) Series P-20. No. 222, p. 12; No. 241, p. 15; No. 272, p. 16; and No. 278, p. 5; No. 294, pp. 9-10. Enrollments are reported in October of each year.

EXHIBIT 18

AGE DISTRIBUTION OF COLLEGE STUDENTS
By Sex and Full-/Part-Time Status
(Numbers in Thousands)
1974

		Number			Percent		
		Male	Female	Total	Male	Female	Total
Under 25	Full-time	3,024	2,509	5,531	46%	38%	83%
	Part-time	532	561	1,094	8	8	17
	Total	3,556	3,070	6,625	54	46	100
25-34	Full-time	562	257	818	26	12	37
	Part-time	809	574	1,384	37	26	63
	Total	1,371	831	2,202	62	38	100
35 and over	Full-time	NA	NA	205	NA	NA	20
	Part-time	NA	NA	820	NA	NA	80
	Total	476	548	1,025	46	54	100

Figures may not add to totals due to rounding.

Source: American Council on Education, Policy Analysis Service, based on U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, No. 278 (Advance Report), (Washington: GPO), 1975.

EXHIBIT 19

COMPARISON OF COLLEGE-GOING RATES
By Family Income Level and By Race
All Dependent Students

1972-73

	White	Black	Difference
Under $5,000	34.2%	27.9%	−6.3%
$5,000 to $9,999	39.0	41.2	+2.2
$10,000 to $14,999	49.2	37.5	−11.7
$15,000 and over	61.0	47.4	−13.6
Total	49.6%	36.0%	−13.6%

1974-75

	White	Black	Difference
Under $5,000	27.9%	31.4%	+3.5%
$5,000 to $9,999	34.3	39.3	+5.0
$10,000 to $14,999	42.4	33.4	−9.0
$15,000 and over	56.0	50.0	−6.0
Total	47.2%	36.1%	−11.1%

Source: American Council on Education, Policy Analysis Service, based on data from the U.S. Department of Commerce, Bureau of the Census, Washington, D.C.

EXHIBIT 20

TRENDS IN COLLEGE-GOING RATES
By Family Income Level and By Race
All Dependent Students

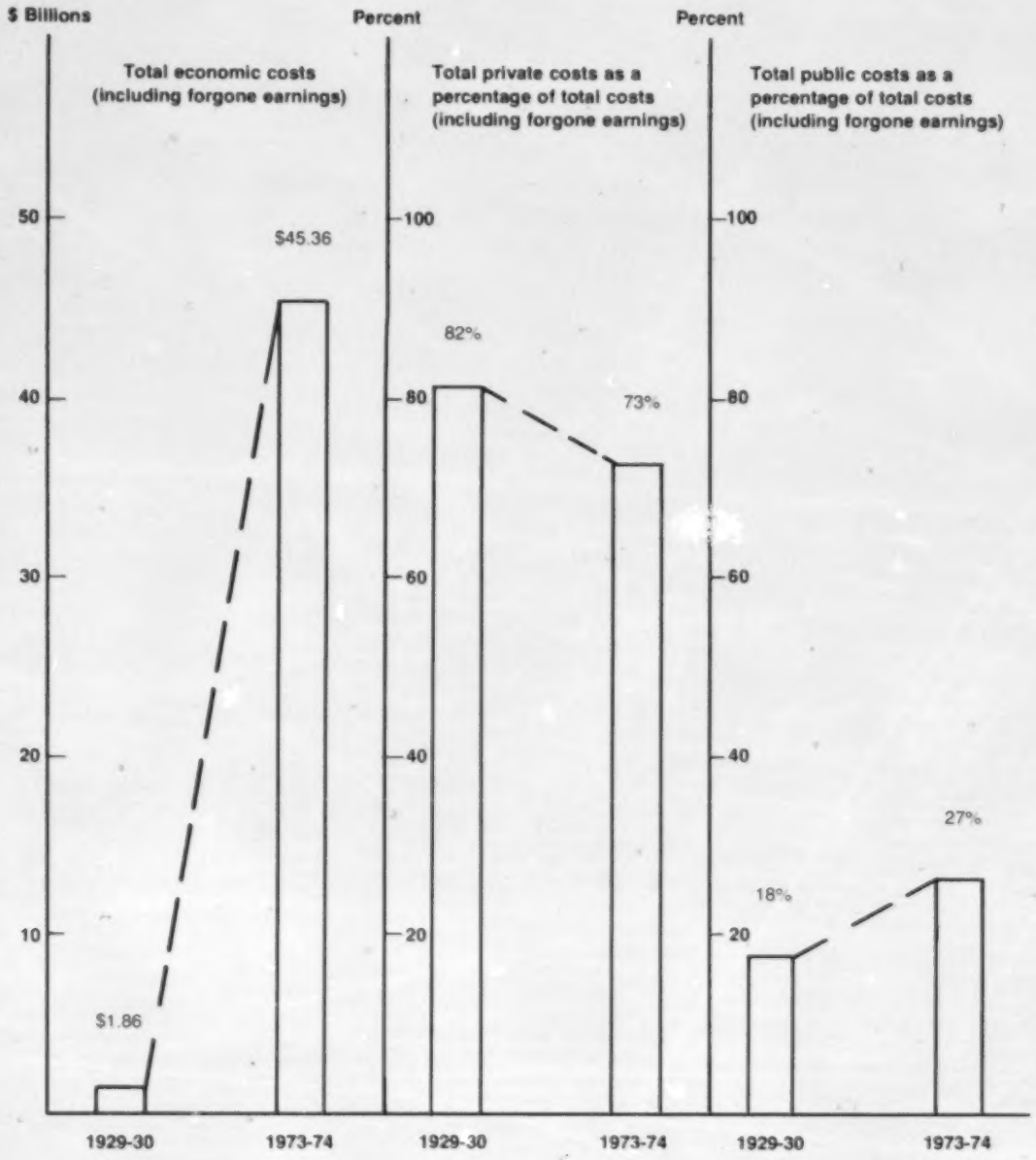
1972-73 TO 1974-75

	White			Black		
	72-73	74-75	Difference	72-73	74-75	Difference
Under $5,000	34.2%	27.9%	−6.3%	27.9%	31.4%	+3.5%
$5,000 to $9,999	39.0	34.3	−4.7	41.2	39.3	−1.9
$10,000 to $14,999	49.2	42.4	−6.8	37.5	33.4	−4.1
$15,000 and over	61.0	56.0	−5.0	47.4	50.0	+2.6
Total	49.6%	47.2%	−2.4%	36.0%	36.1%	+0.1%

Source: American Council on Education, Policy Analysis Service, based on data from the U.S. Department of Commerce, Bureau of the Census, Washington, D.C.

EXHIBIT 21

CHANGES IN PUBLIC AND PRIVATE SHARES OF TOTAL ECONOMIC COSTS OF HIGHER EDUCATION, INCLUDING ESTIMATED FORGONE EARNINGS OF STUDENTS, 1929-30 TO 1973-74 (IN CONSTANT 1967 DOLLARS)



Source: Reprinted from *The State and Higher Education, A Proud Past and a Vital Future, Supplement*, Carnegie Foundation for the Advancement of Teaching, New York, 1976, p. 3. Estimates were developed from U.S. National Center for Education Statistics and U.S. Bureau of Labor Statistics data. For method of estimating forgone earnings, see Carnegie Commission on Higher Education, *Higher Education: Who Pays? Who Benefits? Who Should Pay?* McGraw-Hill, New York, 1973. pp. 49-50.

EXHIBIT 22

TRENDS IN COLLEGE TUITION AND IN MEDIAN FAMILY INCOME

Year	Median Family Income[1]	Public 4-Year		Private 4-Year	
		Estimated Tuition and Fees	Percent of Income	Estimated Tuition and Fees	Percent of Income
1974	$12,902	$550	4.3%	$2,100	16.3%
1970	9,867	400	4.1	1,600	16.2%
1965	6,957	280	4.0	1,200	17.2
1960	5,620	180	3.2	700	12.5
1955	4,418	140	3.2	450	10.2
1950	3,319	130	3.9	400	12.1
		Percentage Increase			
1970 to 1974	31%	38%		31%	
1960 to 1970	76%	100%		129%	

[1] Median family income figures are U.S. aggregates expressed in current dollars.

Source: American Council on Education, Policy Analysis Service, based on U.S. Office of Education and U.S. Bureau of the Census estimates, December 1976, Washington, D.C.

EXHIBIT 23

SIBLING SQUEEZE: Average Number of Years With More Than One College-Age Child (Sib Years*) in Families With Children Entering College Between 1965 and 1985 in Michigan

Age X		Potentially Entering College in Year	Number of Children of This Age Living in Households (000's)		Average Sibling Overlap at College Age	
Age in 1970	Age in 1960					
3		1985	155		1.95	
4		1984	164		2.10	
5		1983	175		2.25	
6		1982	177		2.48	
7		1981	189		2.62	
8		1980	187		2.78	
9		1979	193		2.81	
10		1978	195		2.79	
11		1977	196		2.84	
12		1976	192		2.77	
13	3	1975	194	193	2.87	2.82
	4	1974		189		2.69
	5	1973		183		2.72
	6	1972		181		2.60
	7	1971		169		2.41
	8	1970		168		2.43
	9	1969		160		2.46
	10	1968		157		2.40
	11	1967		155		2.22
	12	1966		155		1.88
	13	1965		144		1.82

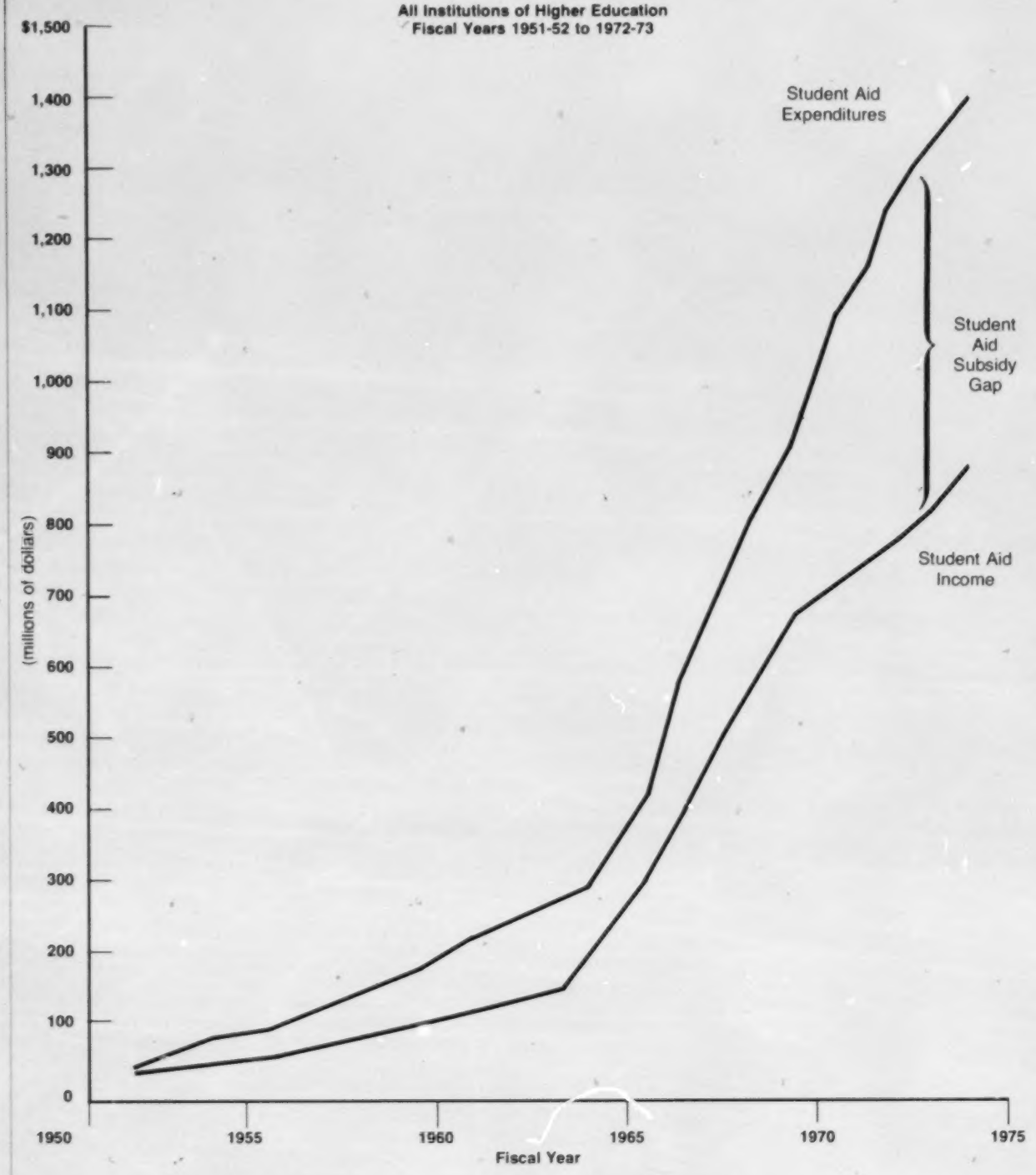
* A sib year is defined as the number of years a child of age X has sibs who will be 18-21 years old while the child of age X will be 18-21 year old. For example, suppose a child of age 8 has two sibs age 6 and 11. When the eight year old is potentially a freshman, his older sib is potentially a senior and when the eight year old is potentially a junior and senior, his younger sib is potentially a freshman and sophomore. The hypothetical child has 3 sib years of college age while the child is potentially in college.

Source: David Goldberg and Albert Anderson, "Projections of Population and College Enrollment in Michigan, 1970-2000," Unpublished paper, Population Studies Center, University of Michigan, July 1974, condensed from Chart 11-b.

EXHIBIT 24

THE STUDENT AID SUBSIDY GAP

All Institutions of Higher Education
Fiscal Years 1951-52 to 1972-73



Sources: 1. U.S. Department of Health, Education, and Welfare, Office of Education, *Higher Education Finances, Selected Trend and Summary Data*, 1968, p. 3;
2. _____, *Financial Statistics of Institutions of Higher Education, Current Funds Revenues and Expenditures*, 1965-66, 1969, p. 10, and annual issues: . . . *1966-67*, p. 13; . . . *1967-68*, p. 11; and . . . *1968-69*, p. 16;
3. American Council on Education, *A Factbook on Higher Education*, First Issue 1976 (Washington: American Council on Education).

EXHIBIT 25

ANNUAL PERCENTAGE INCREASES IN PRICE INDICES FOR HIGHER EDUCATION AND FOR THE CONSUMER PRICE INDEX

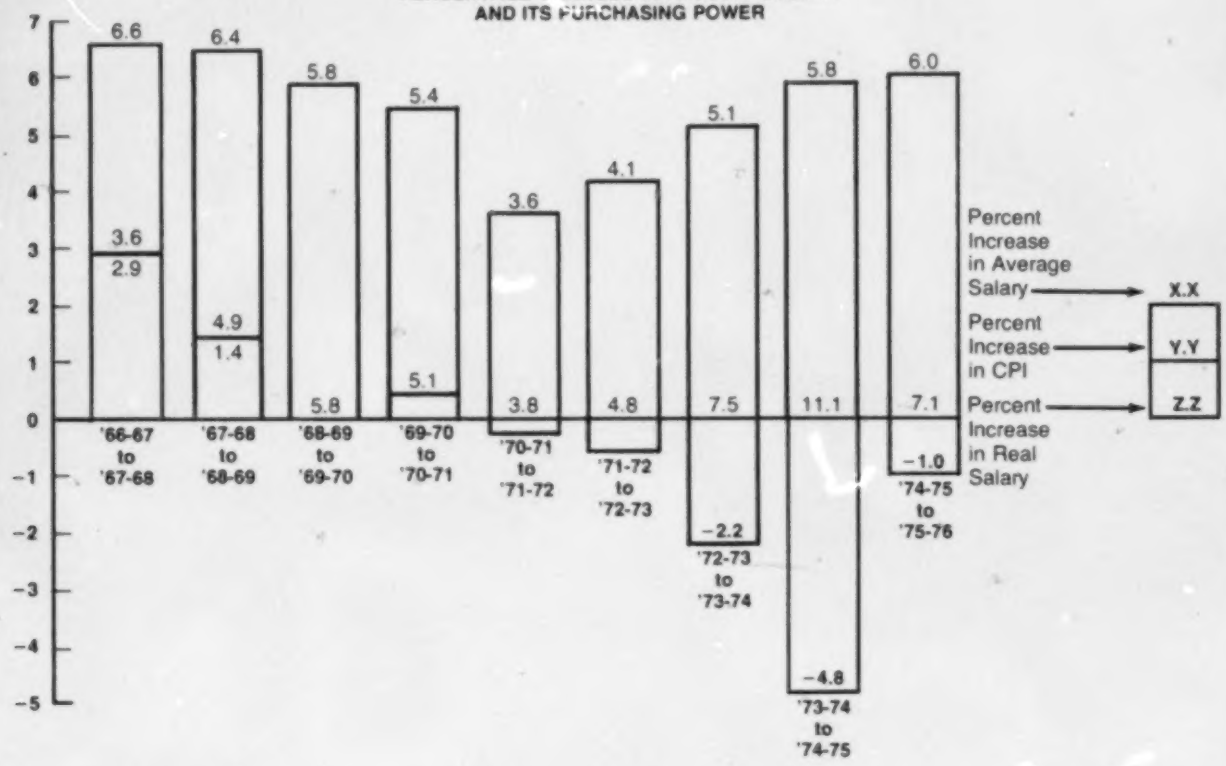
Fiscal Year	Higher Education Price Indices					Consumer Price Index
	Halstead Instruction	O'Neill Instruction	USDC-BEA Private Higher Ed.	Wynn Private College	NSF R and D	
1963-64	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)	(100.00)
1964-65	4.30	4.80	6.40	3.70	3.20	1.50
1965-66	4.99	4.49	5.45	4.24	3.49	2.37
1966-67	5.21	5.21	4.81	5.00	4.31	2.79
1967-68	5.99	5.99	5.70	5.37	4.76	3.56
1968-69	6.80	6.39	5.87	6.36	4.97	4.79
1969-70	6.90	6.01	6.16	7.15	5.47	5.70
1970-71	6.39	5.66	5.73	6.09	5.57	5.06
1971-72	5.53	4.54	4.60	4.91	NA	3.81
1972-73	5.11	5.46	4.79	5.54	NA	4.79
1973-74	6.99	11.22	NA	NA	NA	8.64
1974-75	8.64	8.63	NA	NA	NA	10.52

Each percentage value indicates a percentage increase in the index for the preceding year. The base year was FY 1963-64, as indicated by the numeral "100" in parentheses for that year.

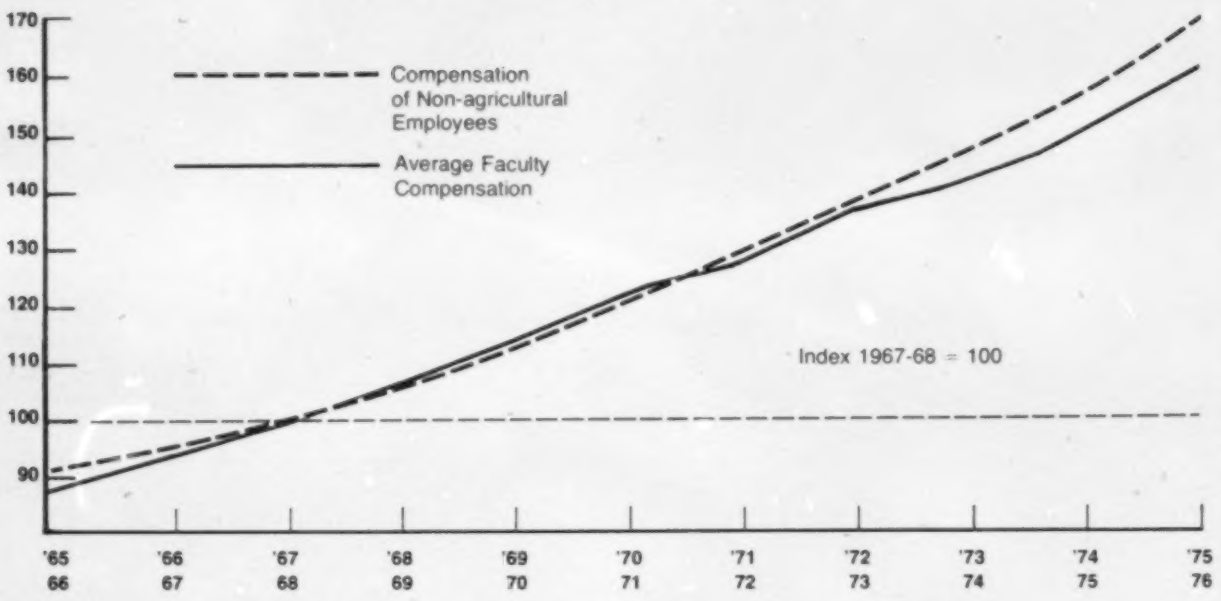
Source: Lyle H. Lanier and Charles J. Andersen, *A Study of the Financial Condition of Colleges and Universities:* 1972-75. American Council on Education, Washington, D.C., Oct. 1975, condensed from Table 16, p. 47.

EXHIBIT 26

PERCENTAGE CHANGES IN FACULTY SALARY AND ITS PURCHASING POWER



INDEX OF AVERAGE FACULTY COMPENSATION AND OF COMPENSATION OF NON-AGRICULTURAL EMPLOYEES



Source: Reprinted from "Nearly Keeping Up: Report on the Economic Status of the Profession, 1975-76," *American Association of University Professors Bulletin* (Washington: American Association of University Professors, Summer Issue 1976) pp. 3 and 4.

EXHIBIT 27

CURRENT-FUND INCOME OF INSTITUTIONS OF HIGHER EDUCATION, Selected Years, 1909/10-1974/75

(Millions of Dollars)

Type of Income	1909-10	1919-20	1929-30	1939-40	1949-50	1959-60
Total Current-fund Income	$82.0	$199.9	$554.5	$715.2	$2,374.6	$5,785.5
Total Educational and General	(73.0)	(172.9)	(483.1)	(571.3)	(1,833.8)	(4,688.4)
Student Tuition and Fees	19.4	42.3	144.1	200.9	394.6	1,157.5
Government	(26.0)	(74.5)	(171.5)	(214.5)	(1,077.6)	(2,563.2)
Federal	4.8	12.8	20.7	38.9	524.3[a]	1,037.0[a]
State	21.2	61.7	150.8	151.2	491.6	1,374.5
Local				24.4	61.7	151.7
Endowment Earnings	12.7	26.5	68.6	71.3	96.3	206.6
Private Gifts and Grants	3.6	7.6	26.2	40.5	118.6	382.6
Other Educational and General	11.4	22.1	72.7	44.2	146.6	378.5
Auxiliary Enterprises	9.0	27.0	60.4	143.9	511.3	1,004.3
Student Aid Grants[b]	nr	nr	nr	nr	16.3	92.9
Other Current Income	nr	nr	11.0	nr	13.2	nr

Type of Income	1965-66	1967-68	1969-70	1971-72	1973-74	1974-75[c]
Total Current-fund Income	$12,734.2	$16,825.2	$21,515.2	$26,234.3	$31,712.5	$35,948.1
Total Educational and General[d]	(10,285.3)	(13,845.6)	(17,254.7)	(21,136.9)	(25,607.2)	na
Student Tuition and Fees	2,669.7	3,380.3	4,419.8	5,594.1	6,500.1	7,286.6
Government[d]	(5,954.6)	(8,033.0)	(10,013.6)	(12,147.5)	(14,944.3)	(18,384.4)
Federal[d]	2,653.8	3,348.2	3,450.9	4,035.5	4,498.9	5,947.3
State	2,984.3	4,181.1	5,787.9	7,121.0	9,182.3	10,989.3
Local	316.5	503.7	774.8	991.0	1,263.1	1,447.8
Endowment Earnings	316.2	364.0	447.3	480.8	576.9	718.2
Private Gifts and Grants[e]	640.7	848.4	1,001.5	1,208.1	1,430.9	1,747.5
Other Educational and General	704.0	1,219.9	1,372.5	1,706.4	2,155.0	1,411.5
Auxiliary Enterprises	2,139.1	2,481.7	2,900.4	3,309.0	3,734.2	4,087.7
Student Aid Grants[b]	309.9	497.9	658.0	764.6	882.6	na
Other Current Income[f]	nr	nr	702.2	1,023.8	1,488.4	2,312.3

Note: Data for 1909-10 and 1974-75 include all states plus outlying parts; data for 1919-20 through 1949-50 include 48 states and D.C.; data for other years include 50 states and D.C. Because of rounding, detail may not add to totals. Figures in parentheses are subtotals.

na: Not available.
nr: Not reported.

a) Includes tuition and fees for veterans.
b) Includes federal, state, and local government and private grants specifically designated for student aid.
c) Preliminary data that are *not* strictly comparable to previous data. A major change in reporting categories and definitions was incorporated into the 1974-75 questionnaire to make it coincide with new standards of college and university financial reporting set forth in publications of the National Association of College and University Business Officers, NCES and the American Institute of Certified Public Accountants.
d) Includes data for Federally Funded Research and Development Centers (FFRDC's). Beginning 1969-70, NCES reports have included FFRDC data in "Other current income" or "Independent operations". In this table, in order to increase comparability with earlier years, estimates of revenue for FFRDC's have been included in those categories in which they were reported previously.
e) From 1967-68 through 1973-74, includes nongovernment funds for "sponsored research" and "other sponsored programs".
f) From 1969-70 through 1973-74, includes data for hospitals in which service to the community was paramount. For 1974-75 includes sales and services of hospitals operated by the institutions.

Sources: 1) NCES, *Digest of Educational Statistics* (Washington: GPO), 1971 Edition, table 129; 1975 Edition, table 118.
2) NCES, *Financial Statistics of Institutions of Higher Education, Current Funds Revenues and Expenditures* (Washington: GPO), *1965-66*, p. 10; *1967-68*, p. 12; *1969-70*, pp. 14, 15; *1971-72*, pp. 16, 17.
3) National Science Foundation (NSF), *Federal Support to Universities, Colleges and Selected Nonprofit Institutions* (Washington: GPO), *Fiscal Year 1972*, p. 20; *Fiscal Year 1973*, p. 13; *Fiscal Year 1974*, p. 19.
4) NSF, *Federal Funds for Research, Development and Other Scientific Activities, Fiscal Years 1974, 1975 and 1976, Detailed Statistical Tables, Appendixes, C & D* (Washington: GPO, 1975), table C-1.
5) NCES prepublication data from the 1973-74 and 1974-75 HEGIS finance surveys.

Reprinted from American Council on Education, *Factbook on Higher Education*, First Issue 1976, (Washington: American Council on Education), Table 76.60.

EXHIBIT 28

MARKET VALUE OF EDUCATIONAL ENDOWMENTS
(Billions of Dollars at Year-End)

Year	Total Assets
1955	$ 4.8
1956	5.5
1957	5.4
1958	6.5
1959	7.2
1960	7.3
1961	8.6
1962	8.3
1963	9.4
1964	10.5
1965	11.7
1966	11.1
1967	12.6
1968	13.5
1969	12.7
1970	13.0
1971	14.3
1972	16.2
1973	14.3
1974	11.4
1975	13.8

Source: *Statistical Bulletin*, May, 1976, Securities and Exchange Commission, as cited in (Ben Laden), *The Effects of Inflation on College and University Finances*, (Baltimore: T. Rowe Price Associates, Inc.), 1976, p. 14.

EXHIBIT 29

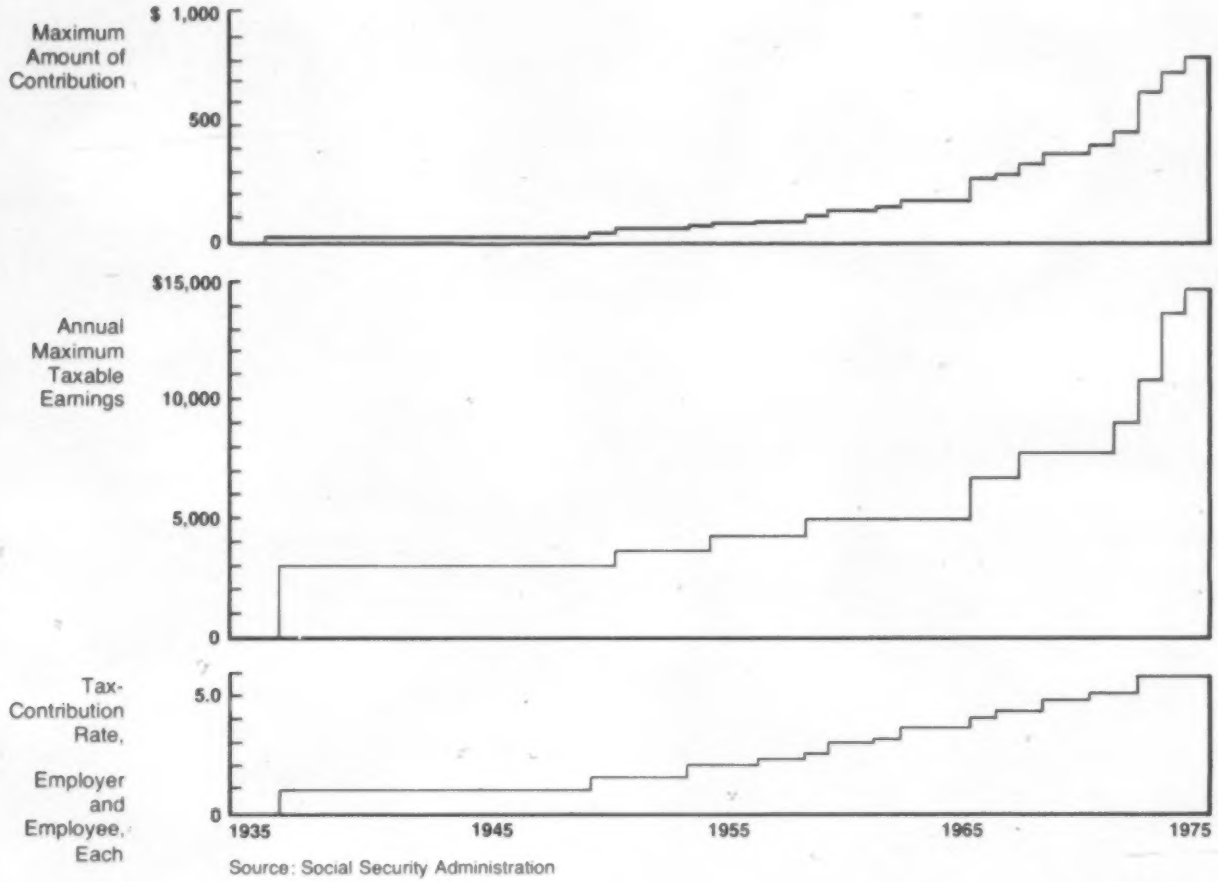
TOTAL SUPPORT BY PURPOSE, ALL COLLEGES AND UNIVERSITIES REPORTING
(Thousands of Dollars)

	1973-74 (988 Institutions) Dollars	Percent Distribution	1974-75 (986 Institutions) Dollars	Percent Distribution	Percent Change
Unrestricted	$ 579,995	33.2	$ 540,218	32.3	− 6.9
Physical Plant	302,336	17.3	258,669	15.4	−14.4
Research	227,957	13.0	251,252	15.0	+10.2
Student Aid	227,832	13.0	222,675	13.3	− 2.3
Faculty Compensation	107,480	6.2	104,833	6.3	− 2.5
Other	301,251	17.2	296,896	17.7	− 1.5
Total	$1,746,851	100.0	$1,674,543	100.0	− 4.1
Current Operations	$ 969,031	55.5	$1,019,741	60.9	+ 5.2
Capital Purposes	$ 777,820	44.5	$ 654,802	39.1	−15.8

Source: Reprinted from *Voluntary Support to Education, 1974-75*, Council for Financial Aid to Education (New York), p. 55.

EXHIBIT 30

SOCIAL SECURITY TAX GROWTH



Source: Social Security Administration

EXHIBIT 31

FEDERAL BUDGET RECEIPTS BY SOURCE
Fiscal Years 1950, 1960, 1965, 1970, and 1975
(Billions of dollars)

	1950		1960		1965		1970		1975	
Source	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total	Amount	Percent of Total
Individual income taxes	$15.7	38.4%	$40.7	44.0%	$ 48.8	41.7%	$ 90.4	46.7%	$122.4	43.6%
Corporation income taxes	10.4	25.4	21.5	23.2	25.5	21.8	32.8	16.9	40.6	14.5
Social insurance taxes	4.0	9.8	14.7	15.9	22.3	19.0	45.3	23.4	86.4	30.7
Excise taxes	7.5	18.3	11.7	12.6	14.6	12.5	15.7	8.1	16.6	5.9
All other	3.3	8.1	3.9	4.2	5.8	5.0	9.5	4.9	15.0	5.3
Total	$40.9	100.0%	$92.5	100.0%	$117.0	100.0%	$193.7	100.0%	$281.0	100.0%

Sources: 1) Barry M. Blechman, Edward M. Gramlich and Robert W. Hartman, *Setting National Priorities, The 1975 Budget* (Washington: Brookings Institution, 1974), p. 7.

2) *The Budget of the United States Government, Fiscal Year 1975*, pp. 322-323, and *Fiscal Year 1977* (Washington: GPO), pp. 324-326.

3) Edward R. Fried, Alice M. Rivlin, Charles L. Schultze, Nancy H. Teeters, *Setting National Priorities, The 1974 Budget* (Washington: Brookings Institution, 1973), p. 7.